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Lüdy

# Alchemistische
und
# chemische Zeichen

Gesellschaft für Geschichte der Pharmazie

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## Das Umschlagbild

stellt das alchemistische Zeichen vor für „Terra foliata tartari". In Linoleum geschnitten vom Verfasser.

## Das Verlagszeichen

der Gesellschaft ist ein Kupferstich von Westermayer, entnommen dem »Taschenbuch für Scheidekünstler und Apotheker« aus dem Jahre 1797.

## Verlag:

Gesellschaft für Geschichte der Pharmazie.

## Jahresbeitrag 10 Mk.

oder entsprechende Währung.

## Mitgliederanmeldungen und Beiträge

sind zu richten an den Schatzmeister: Apotheker G. Urdang, Berlin NW. Lessingstraße 37, Postscheck-Konto Berlin 103931.

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# ALCHEMISTISCHE UND CHEMISCHE ZEICHEN

VON

Dr. LÜDY JUN., BURGDORF - SCHWEIZ

MIT 30 ABBILDUNGEN
UND 128 TAFELN

GESELLSCHAFT
FÜR GESCHICHTE DER PHARMAZIE

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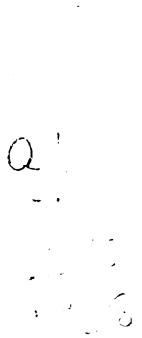

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Meinen lieben Eltern

in Dankbarkeit zugeeignet!

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# Vorwort.

Motto: „Nicht indem wir Tatsachen, welche die Geschichte uns überliefert, dem Gedächtnis einprägen, um nachahmend zu wiederholen, was früher geschehen, sondern indem wir durch die Anschauung mannigfacher Verhältnisse die Erfahrungen vergangener Zeiten uns aneignen, fremde Gedanken und Ansichten zu verstehen, zu prüfen, zu behalten oder zu verwerfen, die eigenen Ansichten zu bilden und zu befestigen streben, wird die Geschichte unsere Lehrerin". Clausewitz.

Dank dem freundlichen Verständnis der Redaktion der Schweizer. Apothekerzeitung und des Vorstandes des Schweizer. Apotheker-Vereins war es mir 1926 möglich, eine mit Tafeln versehene Arbeit über alchemistische Zeichen in den »Pharmaceutica Acta Helvetiae« in Nr. 2 des ersten Jahrganges zu veröffentlichen. Verschiedene anerkennende Zuschriften ermutigten mich, so daß ich der Aufforderung, meine Publikation in erweitertem Umfange auszuarbeiten, die der Schriftleiter der Veröffentlichungen der Gesellschaft für Geschichte der Pharmazie, Herr Fritz Ferchl, Mittenwald, an mich richtete, mit Vergnügen Folge leistete. Wohl gibt es eine ganze Anzahl Tabellen und Verzeichnisse der alchemistischen Zeichen, sie sind aber meistens in Büchern enthalten, die heute unbekannt oder doch sehr schwer zugänglich sind. Außerdem sind die Tafeln entweder unvollständig oder dann so reichhaltig, daß sie nicht mehr zu überblicken sind.

Die vorliegende Arbeit will die alchemistischen Zeichen des Mittelalters und der beginnenden Neuzeit so zusammenstellen, daß der Pharmaziehistoriker beim Studium alter Schriften sich rasch über die Bedeutung der rätselhaften Zeichen, die ihm auf Schritt und Tritt begegnen, orientieren kann. Sie will aber auch Kollegen, die der Fachgeschichte noch fernstehen, sowie weiteren Kreisen es ermöglichen, Aufschriften auf alten Gefäßen, Rezepten und sonstigen verstaubten Zeugen versunkenen Lebens zu entziffern und so einen Blick in das Wesen und den Geist unserer Altvorderen zu werfen. Wenn unser Büchlein dazu beitragen könnte, weitere Kreise zu gewinnen für die tätige Mitarbeit zur Erreichung der von der Gesellschaft für Geschichte der Pharmazie gesteckten hohen Ziele, dann wäre seine vornehmste Aufgabe erfüllt.

In diesem Zusammenhang muß ich eine kleine Berichtigung einzuschieben mir gestatten. Herr Prof. Walden-Rostock schreibt in seinem

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- Spiritus vini rectificatus
- Spiritus vini rectificatus
- Alembicus
- Zingiber

## Signa

- Alembicus
- Borax
- Borax
- Crocibulus
- Cementare
- Destillare
- Destillare
- Filtrare
- Fuligo
- Fuligo
- Hora
- Latereş
- Argentum Luna
- Ovum
- Phiola
- Regulus

- Retorta
- Aurum, Sol
- Alumen ustum

## Mensurae. Pondera

- ad p.o. Ad pondus omnium
- ʒ Drachma, Holca
- ℥ Drachm, Holca
- ʒß Drachma ſemiſ
- gr Granum
- ℔ Libra
- ℔ Libra
- c.p. Libra civiliş
- mp Libra medicin
- p Pugillus
- q.s. Quantum ſatiş
- q.v. Quantum viş
- ℈ Scrupulus
- ℈i Scrupulus
- ℈ß Scrupulus ſemiſ
- ℥ Unica
- ℥ Unica
- ℥ß Semiunica

## Varia

- Argentum vivum
- Aries
- Ochra
- Ochra
- Saccharum
- Septimana
- Cinnabariş
- Cinnabariş
- Cobaltum
- Ebullitio
- Extrahere
- Fel vitri
- Plumbum, Saturnuş
- Plumbum, Saturnus
- Stannum, Jupiter
- Phlegma
- Sagittarius
- Carbo
- Capricornus
- Atramentum Vitriolum

Comp. et del. ab Dr Lüdyjr

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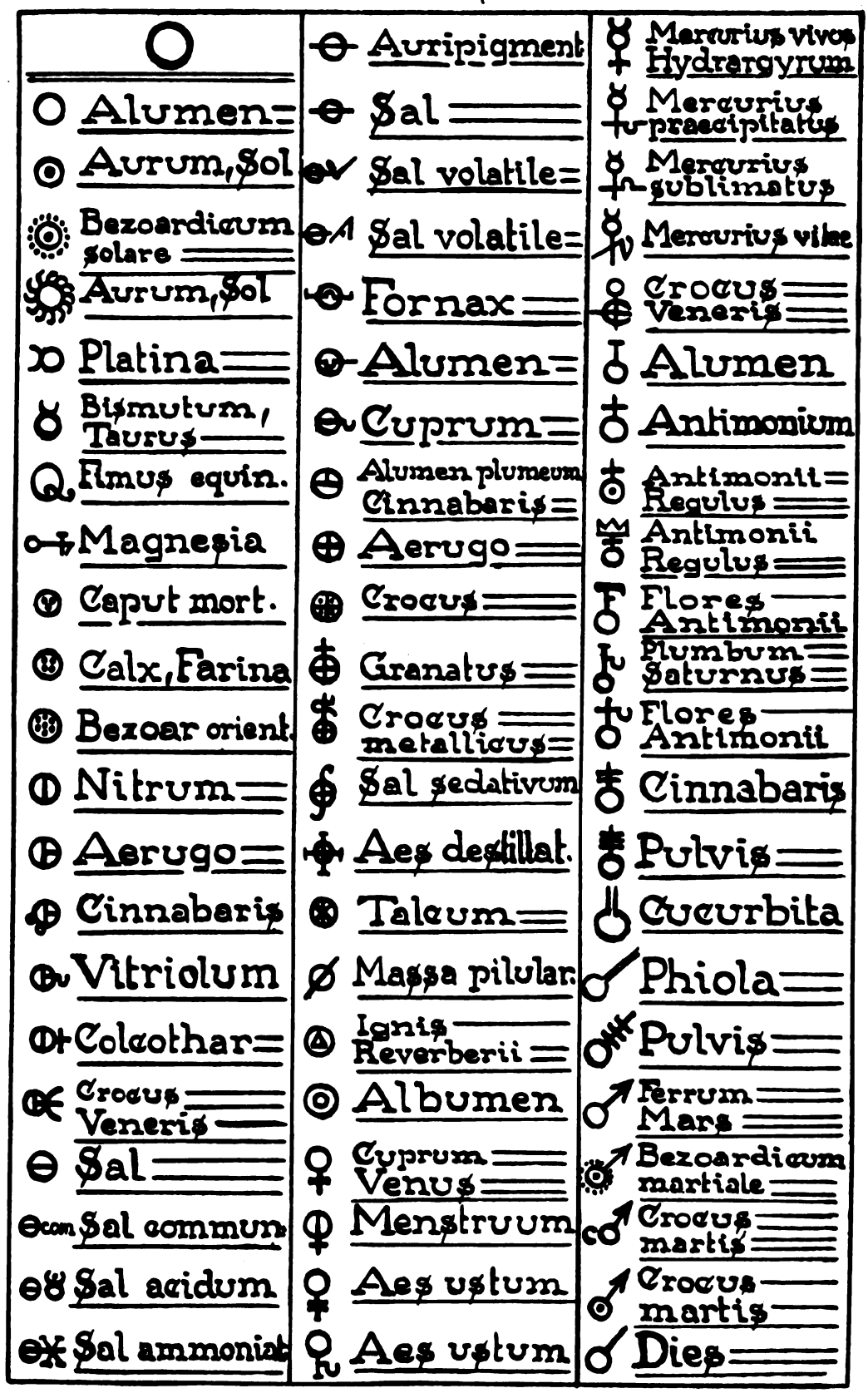


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| | | |
|---|---|---|
| Dies | Arsenicum album | |
| Nox | Antimonium spagyriae praep. | Acidum / Acetum |
| Bolus | Aurum potabile | Acetum dest. |
| Realgar | Aqua vitae | Acid. nitric. |
| Taurus | Aqua fortis | Acid. vitrioli |
| Cobaltum | Mercurius vivus | Acid. salis |
| Alcali | Succus | Acid formic. |
| Fluere | Oleum | Acid. tartar. |
| Leo | Argentum / Luna | Acid. arsenic |
| Retorta | Mel | Atramentum |
| Recipiens | Lapis silex | Cerussa |
| Zincum | Lignum | Aerugo |
| Cera | Creta | Calx viva |
| Crucibulus | Acetum terdestillatum | Calx |
| Magnesia | Carbo | Talcum |
| Oleum empyreumat. | Oleum essentiale | Acetum dest. |
| Arsenum | Atramentum / Vitriolum / Arsenicum rubr. | Hora |
| Acid. arsenic. | Auripigment. | Mensis |
| Arsenum | Arena | Sal ammoniac. |
| Cerussa | Arena | Sal ammoniac. |
| Auripigment. | Auripigment. Realgallum. | Aestas |
| 69 Cancer | | Aestas |

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gediegenen Aufsatz »Zur Entwicklungsgeschichte der chemischen Zeichen«*) folgendes:

»Es ist bemerkenswert, daß die alchemistischen Zeichen, diese documents humains aus einer weit zurückliegenden Periode, gerade in jüngster Zeit reges Interesse gefunden haben, und zwar sind es vorwiegend die nichtchemischen Kreise, oder außerhalb der Gemeinde der historischen Forscher Stehende, die für diese Belebung Sorge tragen. Sucht man nach den tieferen Gründen für diese Geistesrichtung, so wird man sie unschwer in der modernen physikalisch-chemischen Forschung, insbesondere in der Lehre vom Bau der Atome und von der Zertrümmerung der Atome und Elemente suchen. Ist doch nur zu oft ausgesprochen worden, u. zw. von Vertretern der heutigen Wissenschaft, daß — vom theoretischen Standpunkt aus — eine Verwandlung der Metalle wohl möglich, also die Alchemistenlehre von der künstlichen Darstellung des Goldes, etwa aus Quecksilber, kein leerer Wahn sei! Erscheint es dann befremdend, daß in weiten Kreisen die Ansicht feste Wurzeln fassen konnte, daß die Alchemisten bereits diese Wege gekannt und diese Transmutation praktisch geübt haben? War dann der Schritt nicht zwingend, daß sie ihre Kenntnisse in den alten Schriften niedergelegt, unter ihren Geheimsymbolen verborgen haben? Das sichtbare Ergebnis dieser Umbiegung von der modernen Theorie zur alten alchemistischen Praxis liegt im heutigen Büchermarkt vor uns, ein Aufflackern der Alchemie und eine Wiedererweckung der geheimen Wissenschaften, der Magie, Kabbala, der Rosenkreuzerlehre durch zahlreiche Einzelschriften, durch Herausgabe jener einst vergeblich zerlesenen Werke, es sind Zeichen unserer Zeit, bedauerliche Abirrungen vom Wege des Fortschrittes. In diesem Zusammenhange sind alsdann auch die verschiedenen Werke zu bewerten, welche die alten Symbole uns bildlich vor Augen führen und begrifflich erschließen wollen . . .«

In diesem Zusammenhang wird auch meine Publikation in den »Pharmaceut. Acta Helvetiae« erwähnt.

Ich hoffe nun, daß ich im Vorstehenden den Zweck meiner Arbeit so umschrieben habe, daß ich nicht mehr in den Verdacht komme, ich wolle alte Alchemie zu neuem Leben erwecken helfen. Das Streben »Gold zu machen« hat sich der Apotheker von heute gewöhnt ganz anderen Kreisen zu überlassen. Überdies: muß jemand, der über Pfahlbauten schreibt notwendigerweise wünschen, daß die Menschen wieder auf das Wasser wohnen gehen? Muß das Streben der Forschung in griechischer Mythologie darin gipfeln, daß Zeus wieder die Oberherrschaft erringt? Man könnte wohl alle Beschäftigung mit historischen Objekten durch diese Logik ad absurdum führen. Allerdings muß ich gestehen, daß es mir nicht uninteressant, obgleich nicht nützlich schiene, wenn man einige Arbeiten genau nach alchemistischem Rezept ausführen und die dabei erhaltenen Körper nach den Methoden der modernen Chemie untersuchen würde.

Auf alle Fälle bestätigt sich neuerdings die Notwendigkeit und Zweckmäßigkeit der Gesellschaft für Geschichte der Pharmazie.**) Nur der Apotheker ist fähig, seine Fachgeschichte zu fassen, nur er ist imstande, dem wirklichen Geist und den Nöten seiner Berufs-

*) Aus »Studien zur Geschichte der Chemie«, Festgabe für Ed. O. v. Lippmann, Verlag Springer 1927.

**) Über deren Ziele vergl. G. Urdang, Wesen und Bedeutung der Geschichte der Pharmazie. Verlag Springer, Berlin 1927.

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vorfahren gerecht zu werden, sind ja doch schon die Vorstudien der Mittelschule für Apotheker oder beispielsweise Chemiker meist nach ganz anderen Gesichtspunkten orientiert.

Für die vorliegende Arbeit habe ich von vielen Seiten liebenswürdige und tätige Unterstützung genossen. Herrn Apotheker F. Ferchl, Mittenwald, verdanke ich sehr zahlreiche Literaturnachweise, er hat mir auch bereitwilligst den Großteil des nötigen Klischeematerials aus seinen, außerordentlich anregenden, illustrierten Apotheker-Kalendern zur Verfügung gestellt und in jeder Beziehung meine Arbeit gefördert. Herrn Privatdozent Dr. Winkler, Innsbruck, dem Vorsitzenden unserer Gesellschaft, bin ich zu Dank verpflichtet vor allem für das leihweise Überlassen seines prachtvollen Exemplars von Sommerhoff's Lexikon, sowie für wertvolle Hinweise auf verschiedene Tatsachen. Herr Anstaltsapotheker W. Zimmermann, Illenau, der Leiter unserer Zentralstelle, hatte die Güte, mir eine ganze Liste von Zeichen zusammenzustellen und Herr Prof. Tschirch, Bern, erteilte mir liebenswürdigst Auskunft über das »Alphabetum chymicum«. Der Vorsteher der Schweizerischen Sammlung für historisches Apothekenwesen an der Universität Basel, Herr Privatdozent Dr. Häfliger, suchte mir aus den Schätzen seiner jungen, dennoch bemerkenswert reichhaltigen Sammlung chemische und alchemistische Schriften heraus und überließ sie mir entgegenkommendst zur Benützung. Die Direktion des British Museum in London veranlaßte in zuvorkommender Weise, daß mir Negativmaterial von den in ihren Sammlungen aufbewahrten, wichtigen syrischen Handschriften zugestellt wurden, während Herr Dr. Wirz, Pfarrer in Basel, sich der großen Mühe unterzog, die mir besonders interessanten Teile dieser Schriften zu übersetzen. Die Übertragung der Tafel aus der griechischen Handschrift der Bibliothek San Marco in Venedig, die schon Berthelot aus der Vergessenheit hervor an den ihr gebührenden Platz in der Literatur gesetzt hat, besorgte mir in freundschaftlicher Weise Herr Dr. Döttling, Burgdorf.

Die Tafeln druckte direkt von meinen Zeichnungen mit Hilfe ihrer Typon-Offset-Methode die Polygraphische Gesellschaft in Laupen (Schweiz), während sich die Druckerei Arthur Nemayer, Mittenwald, wie bei allen bisherigen Publikationen unserer Gesellschaft, um eine gefällige Form des Textteils bemühte.

Allen sei an dieser Stelle für die Unterstützung und tätige Hilfe herzlichster Dank ausgesprochen.

Burgdorf (Schweiz), Sommer 1928

*Dr. F. Lüdy jun.*

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# ALCHEMISTISCHE UND CHEMISCHE ZEICHEN

Es ist heut zu Tag unter allen Wissenschafften, welche der von Fürwitz nimmer satte Geist des Menschen auszuspähen sich bemühet, oder vorgenommen hat, und in welcher er durchaus die ansehnlichste Schritte gethan, wann wir unsere Zeiten mit den Erfindungen unserer Voreltern vergleichen, keine wegen ihrer Dunkelheit so verschreyt, als die Arzney-Wissenschafft, Chemie, und Alchemie, ja, so reizend, als sie alle drey sind, so sehr schröcken sie bey den ersten Blicken nur in ihre Vorhöfe bald mit ihren unzählichen Räthseln diejenige ab, welche gleichsam von weitem etwas davon geniessen und einsehen wollen, bald die Anfänger unter ihren Lehrlingen selbst, wann sie ihnen da ein Ungeheuer von Abkürzungen und wunderbaren Zeichen, davon offt nirgends kein Schlüssel zu finden ist, dort von den seltsamen Ausdrücken, die keine Sprache noch Geschlecht unter der Sonne versteht, vor die Augen leget. Keine aber unter allen diesen Wissenschafften ist an widersinnischen Zeichen und Ausdrücken reicher, als die edle Jungfer Alchemie.

So beginnt das kleine und recht selten gewordene „Oraculum“ [1]), das ohne Angabe eines Verfassers im Jahre 1755 von der Gaumischen Handlung in Ulm und Memmingen herausgegeben wurde. Im Vorwort heißt es später:

„Wir wollen mit diesen Exempeln von hocherleuchteten Träumen vorlieb nehmen, welche gewiss die Alchemie nicht nur dunkel genug vorstellen, sondern auch verdächtig machen, ob sie nicht vieles von betrügerischer Eitelkeit in sich habe? Mit ihren vielen hieroglyphischen Zeichen gehet es nicht viel besser, und das allerverdächtigste bey den Ausdrücken und Zeichen ist dieses, daß sie der eine so, der andere wieder anders erklärt, und alle zuverlässige, und untrügliche Meister seyn wollen. Inzwischen dörfen wir doch das Kind nicht ganz mit dem Bad ausschütten, und können auf der einen Seite noch nicht mit vollem Grund behaupten, daß die Verwandlung der unedlen Metalle in edle ganz und gar unmöglich seye, noch auch alle ihre Versuche und Processe vor gänzlich falsch, unnütz und eitel erklären.

Ueber das alles so haben nicht nur gute, und rechtschaffene Chemisten, denen es ein wahrer Ernst ist, allein der Natur recht nachzuforschen, sie in allen ihren Handgriffen auszukundschafften, und dem menschlichen Geschlecht mit Zubereitung und Er-

[1]) Medicinisch-Chymisch- und Alchemistisches Oraculum. . . . Ulm und Memmingen 1755 in der Gaumischen Handlung. (Eine zweite Auflage des Buches ist 1772 bei A. L. Stattio in Ulm, ebenfalls anonym, erschienen.

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findung kräfftiger Arzney-Mittel zu dienen, sondern auch die Aerzte aus der Alchemie viele Zeichen und Abkürzungen angenommen, und diese hier und da in ihren Schrifften um der Kürze willen gebraucht, daß man also diese nicht wohl lesen und geniessen kan, ohne einen deutlichen und erklärenden Begriff aller dieser Zeichen und Abkürzungen zu haben; Nach und nach haben sowohl die Chemisten, als die Aerzte sich neue erwählet,

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Fig. 1. Seite aus „Medicinisch-Chymisches Oraculum . . .“ von 1755.

und derselben in Büchern und Recepten bedienet, daß man nirgends wohl fortkommen kan, ohne dieselben zu verstehen. . . . .“

Die Vorrede schließt:

„. . . . Im übrigen, gleichwie wir diese Sammlung vornehmlich zu dem Verständniß der schon heraus gekommenen Schrifften und der täglich vorkommenden Recepte zusammen getragen haben, und weder die Chemisten noch die Aerzte einschränken

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können, daß sie sich solcher Zeichen und Abkürzungen nicht nach ihrer Gelegenheit bedienen dörfften, also ist doch auch unsere Meynung auf der andern Seite gar nicht diese, daß sich ein Chemist oder Arzt diese Zeichen und Abkürzungen, außer den allerbekandtesten, angewöhnen solle, sondern wir halten vielmehr, besonders in Recepten, es allezeit vor besser und sicherer, wann man die Worte deutlich ausschreibt, und sich der Zeichen, so viel möglich enthält, anderst kan leicht durch Ungeübte ein Irrthum vorfallen, der großen Schaden nach sich ziehet, und allein solchen Tändeleien zuzuschreiben ist, es ist auch dieses bey vielen Zeichen um so leichter zu befolgen, als sie öffters so weitläufftig und verkünstelt sind, daß man bequemer das Wort, so sie bedeuten, ausschreiben, als das Zeichen hinmahlen kan".

Nach diesen objektiven und klug den Wert der Zeichen abwägenden, einleitenden Worten bringt das „Oraculum" auf 38 Seiten verteilt ein la-

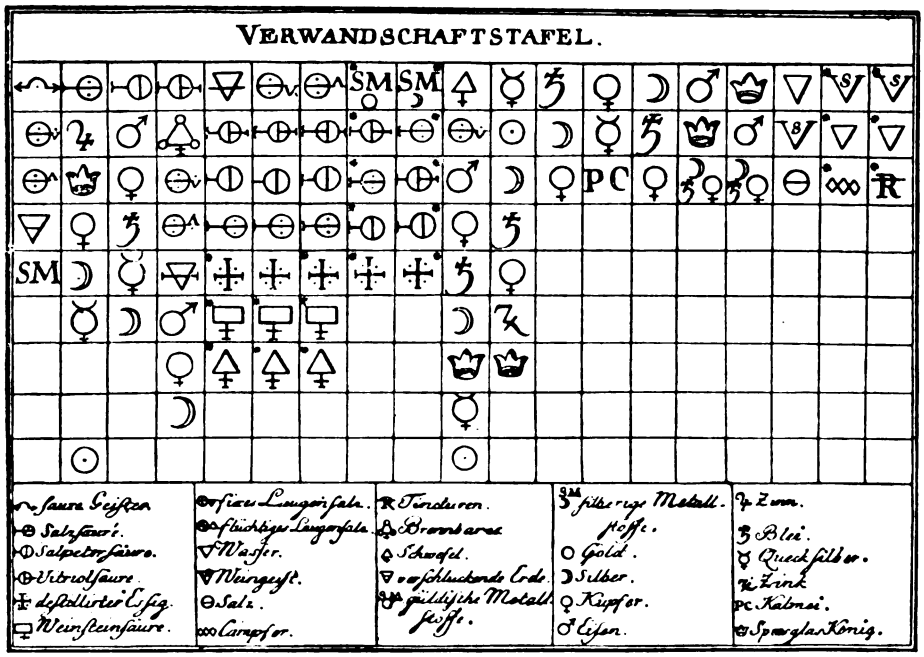


Fig. 2. Nach Geoffroy 1718.
Aus illustr. Apotheker-Kalender 1928 (Herausgeber: F. Ferchl, Mittenwald).

teinisches Register vieler Stoffe, Werkzeuge, Gewichte, Zeiten und Manipulationen. Hinter jedem lateinischen Wort stehen einzelne, oft aber 40 und mehr wunderliche Zeichen und zuletzt folgt eine deutsche Übersetzung des lateinischen Wortes. (Fig. 1). Das Buch hatte also zweifellos den Zweck die Unmenge alchimistischer Zeichen übersichtlich geordnet darzubieten, um einerseits das Studium der reichlich mit solchen Zeichen gespickten, alchimistischen und chemisch-medizinischen Schriften zu ermöglichen, andererseits das Lesen ärztlicher Rezepte, auf denen bis weit in die neuere Zeit derartige Zeichen verwendet wurden, zu erleichtern.

Jedoch war der Autor des Oraculi keineswegs, wie man erwarten könnte, ein begeisterter Anhänger der alten Zeichen, im Gegenteil, er ist

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eher dafür, sie fallen zu lassen. Sogar von Tändelei schreibt er im Schlußsatz seines Vorwortes. Diese Einstellung des anonymen Verfassers ist um so eher verständlich, wenn man bedenkt, daß schon 1718 Geoffroy sen. mit seiner „Table des différents rapports observés entre différentes substances" hervorgetreten war, wobei er neben den alten Zeichen eine ganze Reihe neuer Symbole einführte und als hauptsächliche Neuerung allgemein gültige Unterscheidungsmerkmale für die Zeichen für Säuren und Salze verwendete (Fig. 2 u. 3). Damit fing die Herrschaft der alten Zeichen, wenigstens in der Chemie, an, ins Wanken zu geraten, das Vertrauen in ihre unbedingte Zweckmäßigkeit begann zu schwinden. 1775 ging Bergman mit seiner Schrift „Von der Attraction" noch einen Schritt weiter. Auch er

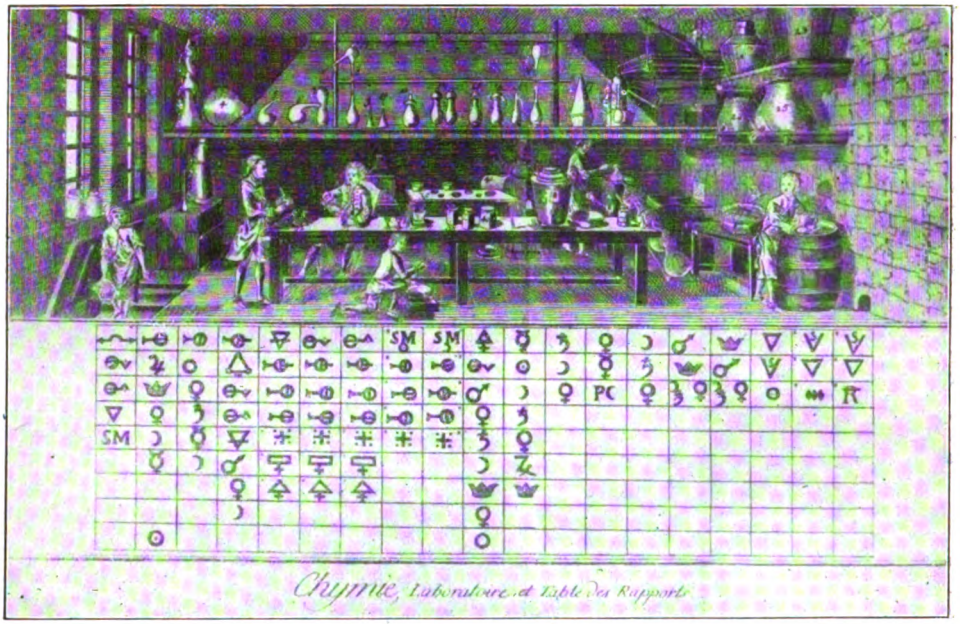


Fig. 3. Chemisches Laboratorium aus der Mitte des 18. Jahrhunderts und Chemische Verwandtschaftstafel, aus: Dictionnaire raisonné des sciences, des arts et des métiers 1780. Aus illustr. Apotheker-Kalender 1928 (Herausgeber: F. Ferchl, Mittenwald).

führte eine Anzahl neuer Symbole ein, mit denen er in die Lage kam, Verwandschaftstabellen aufzustellen, die aber nicht zu verwechseln sind mit den Tabellen von Geoffroy. Bergman stellte für alle möglichen chemischen Umsetzungen ein jeweils im Viereck angeordnetes Schema auf, auf welchem durch Klammern die chemischen Vorgänge dargestellt wurden. Während man mit den alten alchimistischen Zeichen nur mehr oder weniger bekannte Objekte bezeichnen konnte, erlaubten es die Bergman'schen Symbole bereits chemische Umsetzungen zur Darstellung zu bringen. Das war zweifellos ein großer Fortschritt. Bergman bezeichnete die Säuren mit dem gemeinsamen Zeichen + (z. B. + ⊕ = Salpetersäure, + ⊕, = Vitriolsäure etc.), dagegen die Metall-Kalche (= Oxyde) mit dem allgemeinen Zeichen Ψ (z. B. Ψ ☉ Gold. Ψ ☽ = Silber, Ψ ♂ = Eisen etc.).

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Mit jeder neuen Erkenntnis der chemischen Vorgänge erhöhten sich auch die Anforderungen, die an die chemische Zeichensprache gestellt wurden; jede dem Naturgeheimnis abgerungene Tatsache sollte sich auch durch die chemische Symbolik darstellen lassen. Wie der wachsende Intellekt des Kindes sich seine Sprache aufbaut, so schaffte und schafft sich die rasch aufblühende Chemie ihre Ausdrucksmöglichkeiten. Scheele verwendete, wie eine Tabelle (Fig. 4) zeigt, ein System, das die alten Zeichen in Verbindung mit den Fortschritten Bergman's benutzte. Fast zur selben Zeit brachten Lavoisier (1782) und Hassenfratz (1787) ganz neue Ideen in die chemische Formelsprache und wenige Jahre später verstand es Dalton

**Die wichtigsten der von Scheele angewendeten chemischen Zeichen**
nach H.T. Scheffers „Chemiske föreläsningar" herausgegeben von Torbern Bergman, Upsala 1775.

Fig. 4.
Aus illustr. Apotheker-Kalender 1925 (Herausgeber: F. Ferchl, Mittenwald).

(um 1808) schon mit ganz eigenartigen Zeichen (Fig. 5) Elemente und Verbindungen zur Darstellung zu bringen.

Die Entwicklungsgeschichte unserer heutigen, chemischen Symbole ist in einer trefflichen Schrift von Prof. Walden, Rostock [2]) behandelt worden. Kurz und das Wesentliche erfassend gibt er eine ausgezeichnete Darstellung der verschiedenen Etappen der chemischen Symbolik, ausgehend von den, nicht mit sonderlicher Liebe behandelten, alchemistischen Zeichen des Mittelalters.

[2]) Zur Entwicklungsgeschichte der chemischen Zeichen von P. Walden, aus der Festgabe für E. v. Lippmann 1927, Springer, Berlin.

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Vorliegende Arbeit möchte sich in erster Linie nun mit diesen mittelalterlichen Zeichen beschäftigen. Wir werden also schon die Zeichen von Geoffroy, geschweige denn die späteren, nicht mehr in den Bereich der Betrachtung ziehen und wenn sie in den Tabellen, der Vollständigkeit wegen, etwa angeführt werden, sie deutlich mit ihrem Autor bezeichnen.

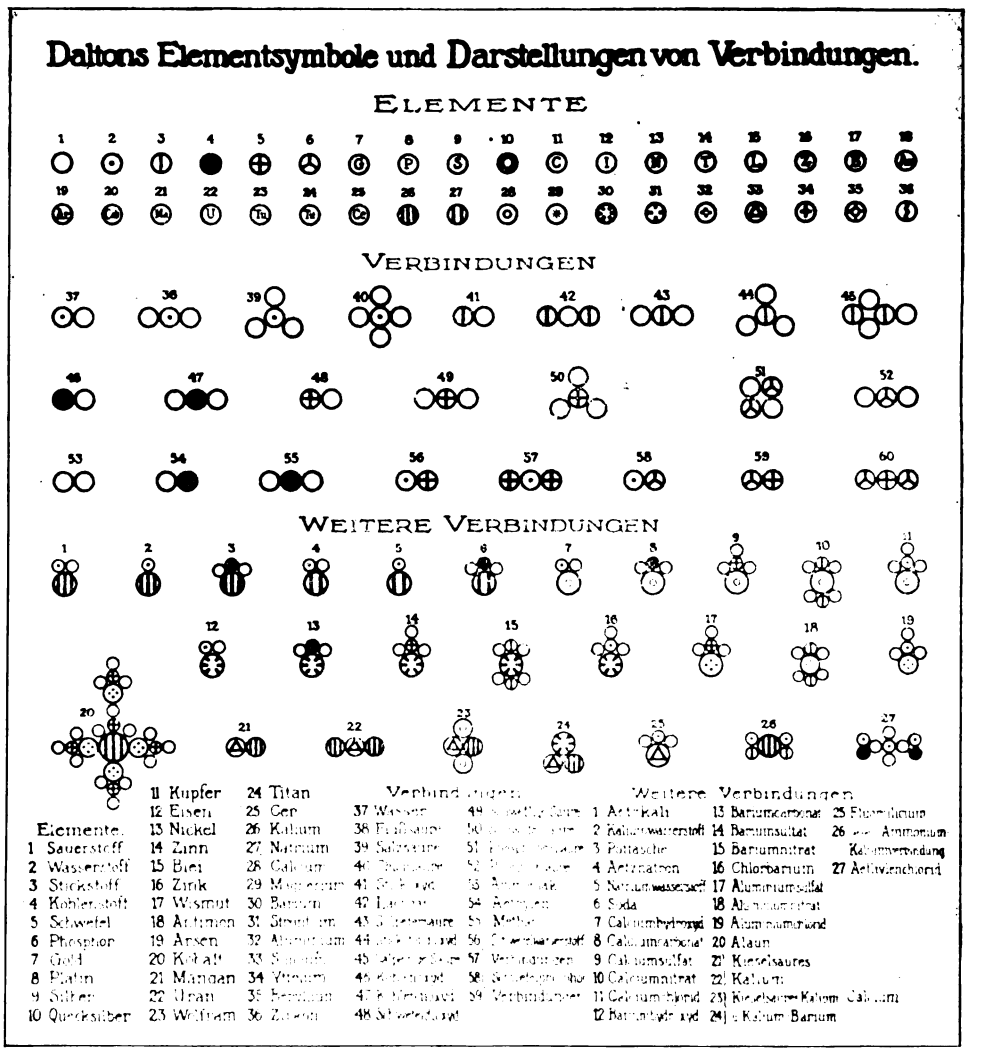


Fig. 5.
Aus illustr. Apotheker-Kalender 1925 (Herausgeber F. Ferchl, Mittenwald).

Über den Ursprung der alchemistischen Zeichen gehen die Ansichten der Historiker sehr auseinander. Walden [3]) zitiert verschiedene Autoren (Ameilhon, Bergman-Wigleb, Kopp, Höfer, Berthelot), von denen einige die Ansicht vertreten, der Ursprungsort der alchemistischen Zeichen sei das alte Ägypten, da verschiedene Symbole Ähnlichkeiten mit Hieroglyphen

[3]) loc. cit.

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oder hieroglyphischen Charakter aufweisen. Prof. E. O. v. Lippmann[4]) dagegen ist der Meinung, daß die Frage nach Alter, sowie nach Herkunft der alchemistischen Zeichen eine sehr schwierige und auch heute noch bei weitem nicht ausreichend geklärte sei. Auf alle Fälle scheint uns die Auffassung, die Gessmann[5]) vertritt („. . . . . und so entstand dann im Mittelalter eine geheime Zeichenschrift, eine Geheimsymbolik . . . . . .") nicht ganz zutreffend. Wenn schon ohne weiteres zuzugeben ist, daß der größte Teil der auf unsern beigefügten Tabellen zusammengestellten Zeichen im Mittelalter erfunden worden ist (schon deshalb, weil viele der damit bezeichneten Objekte erst im Mittelalter bekannt wurden), so ist der Ursprung und die Idee, Gegenstände und Tätigkeiten mit symbolischen Zeichen zur Darstellung zu bringen, viel älter. Es ist das Verdienst M. Berthelot's[6]) zahlreiche Handschriften, die unbeachtet in den großen Bibliotheken und Museen der europäischen Geisteszentren lagen, entziffert und der Öffentlichkeit unterbreitet zu haben. Unter anderem (für uns von besonderem Interesse) veröffentlichte er 1888 Handschriftensammlungen griechischer Alchemisten, auch entzifferte er syrische Alchemisten-Handschriften, die in London und Cambridge aufbewahrt liegen.

Dr. F. Strunz weist in der Einleitung zu der deutschen Ausgabe von Berthelot (Chemie im Altertum und Mittelalter) mit Recht darauf hin, daß die Alchemie, und mit ihr die Chemie, aus der Praxis hervorgegangen, und erst aus ihr eine theoretische Disziplin entstanden sei. Analog mag es, unserer Meinung nach, mit der Entstehung der Zeichen bestellt sein. Waren diese ursprünglich nur dazu da als Kurzschrift der Praxis zu dienen, so erhielten sie ihren geheimnisvollen Nimbus erst dann, als eine kulturell höherstehende Gesellschaftsklasse die Früchte ihrer Geistestätigkeit vor unberufenen Händen zu schützen trachtete.

Während bei Ägyptern und Babyloniern, in der Frühzeit auch bei den Griechen, chemische Fragen von Gelehrten, die zugleich Priester waren, behandelt wurden, kamen im VI. Jahrhundert v. Chr. erst die Griechen dazu, eine von Wundern und Zauber freie, rationelle Wissenschaft auszubauen, wobei Platon (427—347 v. Chr.) und Aristoteles (384—322 v. Chr.) besonders nachhaltigen Einfluß ausübten.[7]) Das eigentliche al-

[4]) Lippmann, Entstehung und Ausbreitung der Alchemie, Berlin 1919.

[5]) G. W. Gessmann, Die Geheimsymbole der Chemie und Medizin des Mittelalters, Verlag des Verfassers 1899, Graz.

[6]) M Berthelot, Les origines de l'Alchimie, Paris 1885.

— Introduction à l'étude de la Chimie des Anciens et du Moyen-âge. Paris 1889.

— Collection des anciens alchimistes grecs, Paris 1888.

— Die Chemie im Altertum und im Mittelalter, ins Deutsche übersetzt von E. Kalliwoda, Leipzig und Wien, Verlag Franz Deuticke 1909.

[7]) Gessmann schreibt in der Einleitung zu seinem zitierten Buch: „. . von bedeutenden Philosophen des Altertums hat man lange Zeit hindurch Plato, Aristoteles und Plinius als Alchemisten betrachtet. Bezüglich der beiden erstgenannten handelt es sich nachweisbar um einen Irrtum, wenn man ihnen alchimistische Bestrebungen in die Schuhe schiebt. Weniger sicher ist dies aber bei Plinius. . ." Sicher aber ist, daß erst die alexandrinische Schule Nachrichten über die Alchimie hinterlassen hat, nach ihrer Überlieferung wäre der Ursprung dieser geheimnisvollen Kunst in Ägypten zu suchen.

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chimistische Zeitalter begann im 4. Jahrhundert n. Chr. Die Kenntnisse der damaligen Zeit umfaßten etwa Gewinnung und Eigenschaften einiger Metalle, dann kannte man: Schwefel, Essig, Steinsalz, Alaun, Potasche, Vitriol, einige Farbstoffe und Beizen, einige Heilmittel, Zucker, Öl, Glas, Seife, Mörtel und neben die philosophischen Elemente des Aristoteles (Wasser, Feuer, Erde, Luft und Quinta essentia) traten nach und nach weitere Grundstoffe.

Die griechisch-alexandrinische Wissenschaft wurde von den syrisch-byzantinischen Alchimisten übernommen, von welchen die Kenntnisse zu den Arabern gelangten. Diese erweiterten das Wissensgebiet mächtig. (Avicenna 980 und Geber im 8. oder 9. Jahrhundert). Ins Abendland gelangten die chemischen Kenntnisse im 12. und im 13. Jahrhundert, und zwar durch die in Spanien eindringenden Araber.

„Auf zwei Wegen, sagt Strunz[8]), ist die Alchemie nach Europa gelangt: 1. die chemische Technik des alten Orients durch das römische Gewerbe, 2. dann die alchimistische Theorie durch die Araber über Spanien."

Die Überlieferung der antiken Wissenschaften, und als Teilstück derselben der Chemie und der Alchimie geschah dadurch, daß die alten Schriften immer aufs neue wieder in die zeitgenössischen Sprachen übersetzt und kopiert wurden. So entstanden die von Berthelot uns erschlossenen Handschriften und Handschriftensammlungen der griechischen Alchimisten, die sich heute in den bedeutendsten Bibliotheken Europas befinden. Auch die syrischen Handschriften von London und Cambridge haben einen solchen Ursprung. „Die syrische Alchimie, so sagt Berthelot, besteht hauptsächlich aus Übersetzungen der griechischen Alchemisten".

Über das syrische Manuskript im British Museum in London äußert sich Berthelot folgendermaßen:

„. . . . Es beginnt mit einer Liste oder einem Register der Zeichen und Namen der Metalle und der Erzeugnisse aller jener medizinischen Stoffe, die in der Chemie angewandt werden. Zeichen und Namen sind denen der griechischen Literaten entweder gleich oder doch ähnlich. Indessen sind die Namen der Metalle nicht nur allein denjenigen der ihnen entsprechenden Planeten beigefügt, sondern auch denjenigen der mit ihnen verglichenen babylonischen Gottheiten, wovon Harran die Erinnerung bewahrt hatte. Das Zinn ist zugleich mit Zeus und mit Beli bezeichnet, das Kupfer durch Aphrodite und durch Baalat oder durch Astar, das Blei durch Kronos oder durch Kemos etc.

Die sieben Erden, die zwölf Steine (als Heilmittel oder Amulett), die neunzehn zum Färben des Glases dienenden Metalle erinnern an diese, den Orientalen und Neupythagoräern so teuern numerischen Kombinationen. . . . . Das Werk beginnt in der Tat mit der Gold- und Silbermacherkunst des Pseudo-Demokrit. Hierauf folgen aus dem Griechischen übersetzte Rezepte für die Bearbeitung der Metalle, der gefärbten Gläser und für die Metalltransmutationen. Aber alles weist auf den Charakter einer rein kompilatorischen Schrift. . . . ."

Durch das freundliche Entgegenkommen der Direktion des British Museum in London war es uns möglich, von den für uns besonders interessanten Partien der syrischen Handschrift Negativabzüge zu erhalten, so daß wir nun in der Lage sind, von einem der ältesten Zeugen alchemistischer Tätigkeit und Schreibweise Abbildungen zu geben. (Fig. 6, 7, 8).

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Der großen Mühe, die uns besonders interessierenden Teile des Zeichenregisters zu übertragen, hat sich Herr Dr. Wirz, Pfarrer in Basel, ein ausgezeichneter Kenner antiker Sprachen, unterzogen. Er kommt zu denselben Schlüssen wie Berthelot, wenn er sagt: „. . . . . Schon die Schrift ist vielfach recht nachlässig und undeutlich. Sodann sind die meisten Wörter, die Namen der verschiedenen Stoffe, nicht syrisch, sondern es sind verballhornte griechische, arabische und persische Worte. Man findet sie nicht nur in keinem syrischen Wörterbuch, sondern es ist oft schwierig, darauf zu kommen, was für ein griechisches etc. Wort es sein soll. . . . ."

Die von Herrn Dr. Wirz besorgten Übertragungen sind den Abbildungen der Handschrift beigefügt. Über diese Schrift selber äußert sich unser Übersetzer wie folgt:

## Anordnung.

Da im Syrischen von rechts nach links geschrieben wird, beginnt also auch jede Zeile rechts und endet links. Darum stehen auch die Zeichen, auf die immer die Angabe ihrer Bedeutung erst folgt, rechts von dieser, und stehen auch am Anfang der Zeilen, rechts.

Aus demselben Grunde der Schriftrichtung des Syrischen ist, wenn — wie in unserm Texte — auf einer Seite zwei Kolumnen Text stehen, die Kolumne rechts die erste, die linke Kolumne die zweite.

## Inhalt.

Kolumne rechts der Seite 2 beginnt — rechts oben — in größerer Zierschrift mit dem Eingangsspruch: „Im Namen des Herrn, des allmächtigen. Amen". Dies ist demnach der Anfang des Textes, es kann also nichts anderes mehr vorausgegangen sein, als das Titelblatt (Seite 1). Dann folgt auf dieser ganzen Kolumne und bis linke Kolumne der Seite 2 (mit 2 bezeichnet) Zeile 6 eine allgemeine Einleitung über die Wirkung der „Wurzeln" (d. h. der Drogen).

Mit Zeile 7 dieser Kolumne links der Seite 2 beginnen die Zeichen, mit je darauf folgender Bedeutungsangabe. Dies sind meist syrische Wörter, aber auch griechische, arabische und persische, jedoch alles in syrischer Schrift. Das reicht bis zum Ende der nächsten Kolumne rechts der Seite 3. Auf Kolumne links der Seite 2 stehen auf jeder Zeile in der Regel drei Zeichen, mit den entsprechenden Bedeutungsangaben, auf Seite 3 Kolumne rechts dagegen bis Zeile 15 nur je zwei Zeichen, während das an dritter Stelle jeder Zeile stehende blasser Geschriebene nicht Zeichen, sondern Wörter, meist griechische, sind. Zeile 16 enthält kein Zeichen, und die letzten Zeilen 17—19 nur je ein Zeichen und dann noch ein blasses Wort, beide mit Bedeutungsangabe, also je nur zwei Abschnittchen.

Manchmal sind — wie auch in den folgenden Kolumnen — eng unter einer Zeile noch dazu gehörige Zusätze geschrieben, die ich nicht als besondere Zeilen zähle. In der linken untern Ecke der Seite 3 Kolumne rechts steht ein durch eine Bogenlinie eingefaßter längerer Zusatz zu „als Salz" und rechts unten ein weiterer Zusatz zum ersten Teil von Zeile 14.

Seite 3 Kolumne links (mit der Zahl 3) Zeile 1—5 enthalten je ein griechisches Wort mit Bedeutungsangabe und Erläuterung. Darauf Zeile 6—13 die sieben „Sterne" (Planeten): Zeichen, Namen und weitere Angaben. Zeile 14 — Seite 4 Kolumne rechts Zeile 7 ebenso die zwölf Tierkreisbilder, indem vor jedem Zeichen noch ein Wort steht, am Anfang der Zeilen, rechts.

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*) loc. cit.

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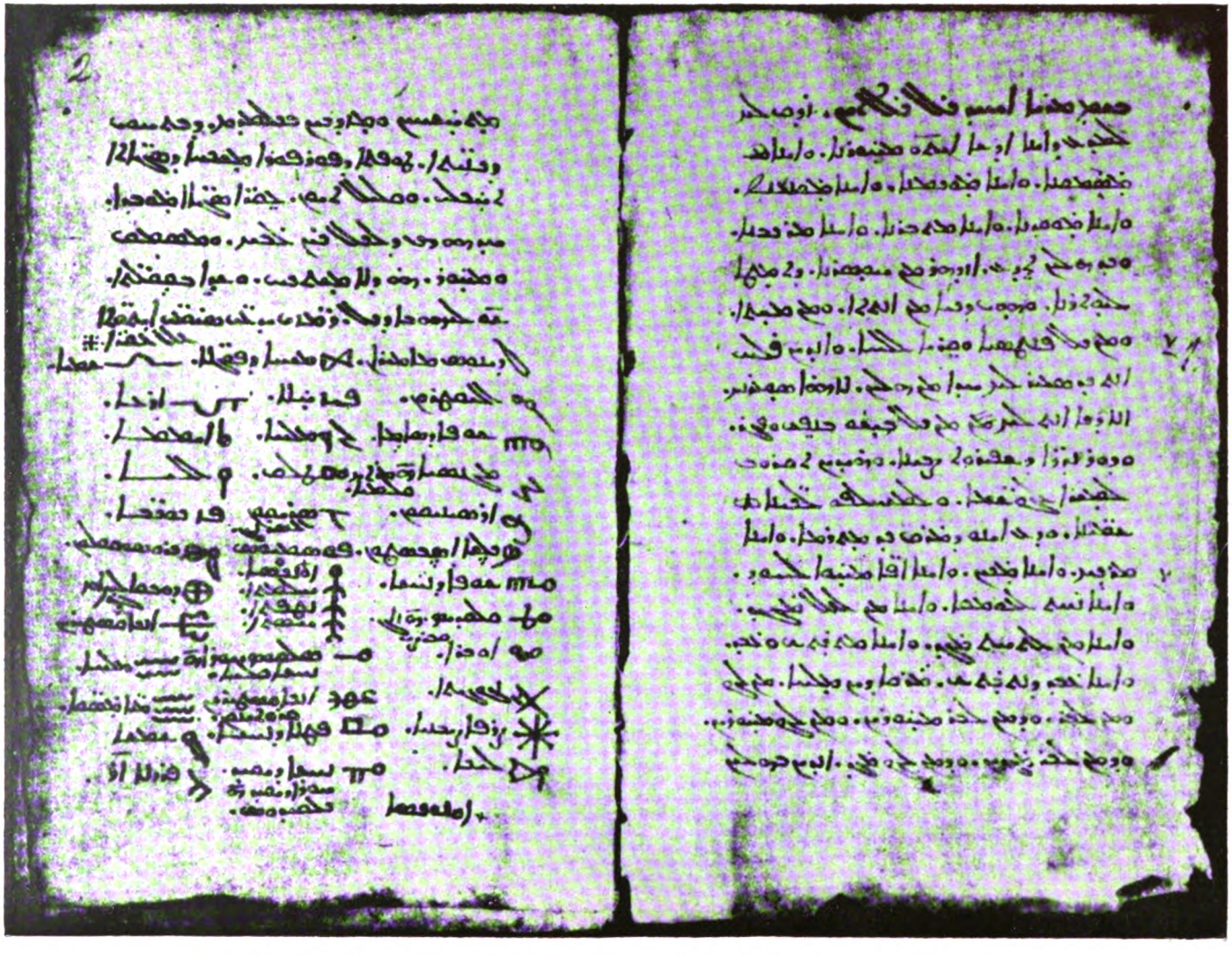

Fig. 6. Aus der syrischen Alchemistenhandschrift im British Museum in London.

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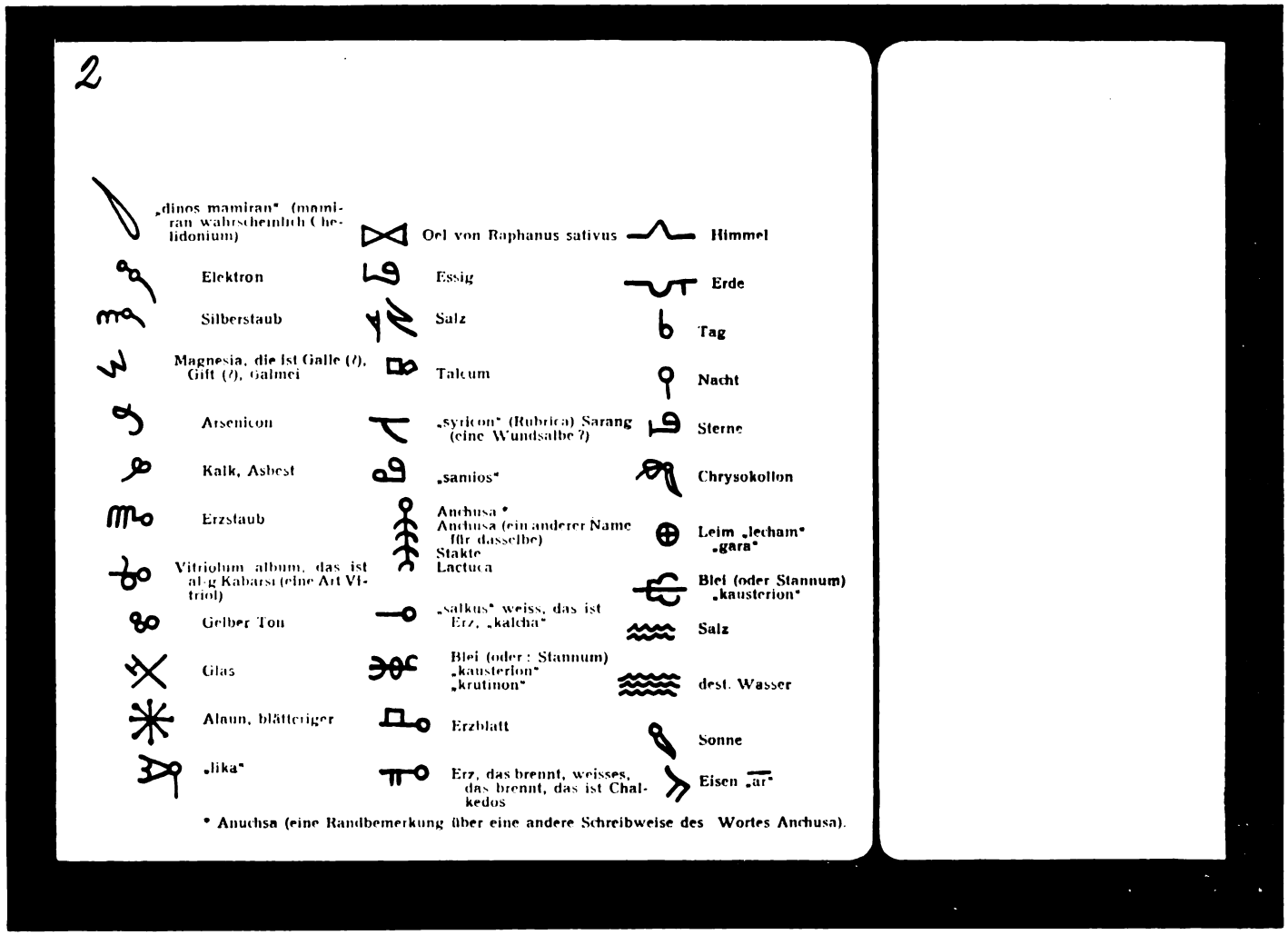


Fig. 6a. Deutsche Übersetzung der mit Zeichen versehenen Teile der syrischen Handschrift (Fig. 6).

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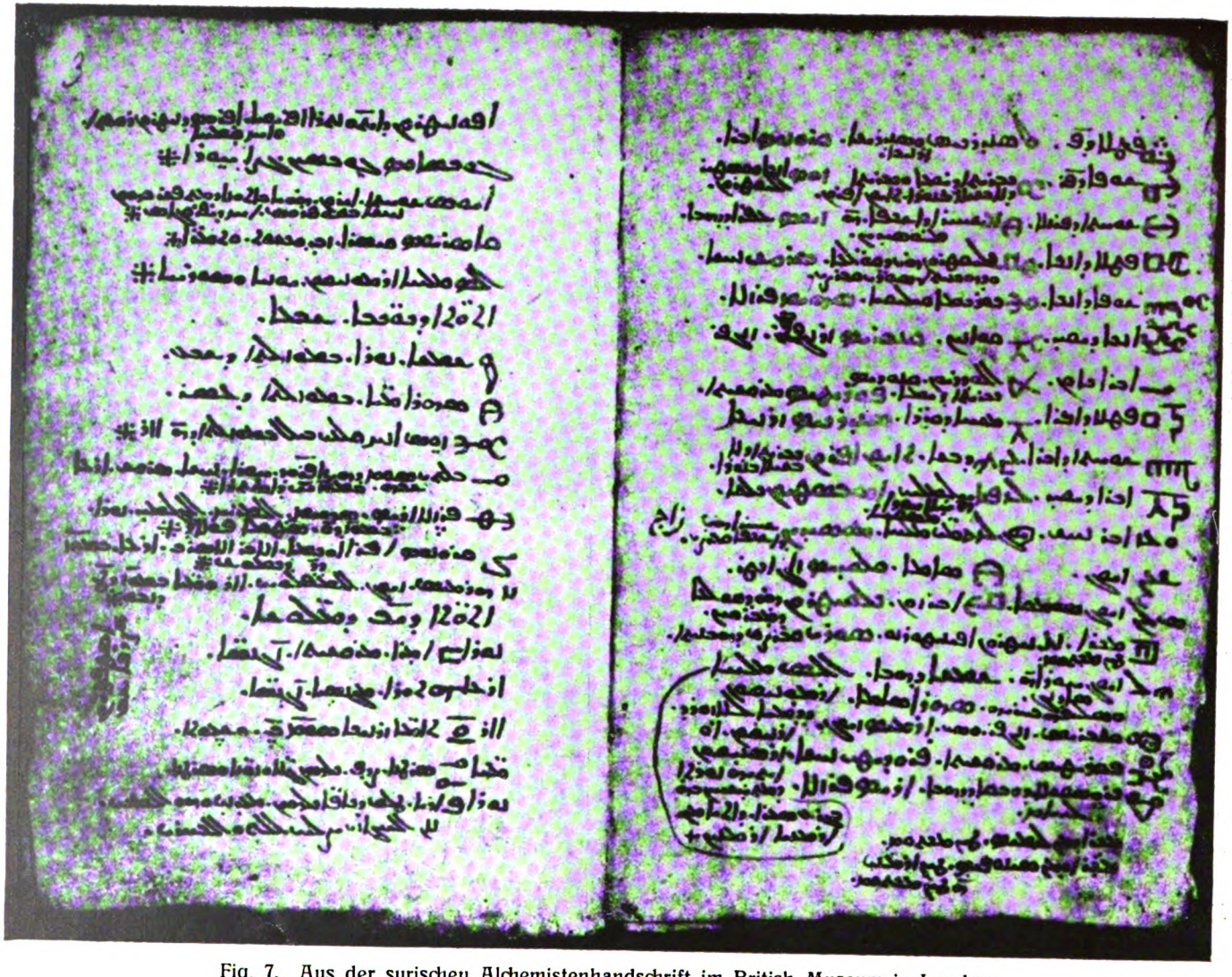

Fig. 7. Aus der syrischen Alchemistenhandschrift im British Museum in London.

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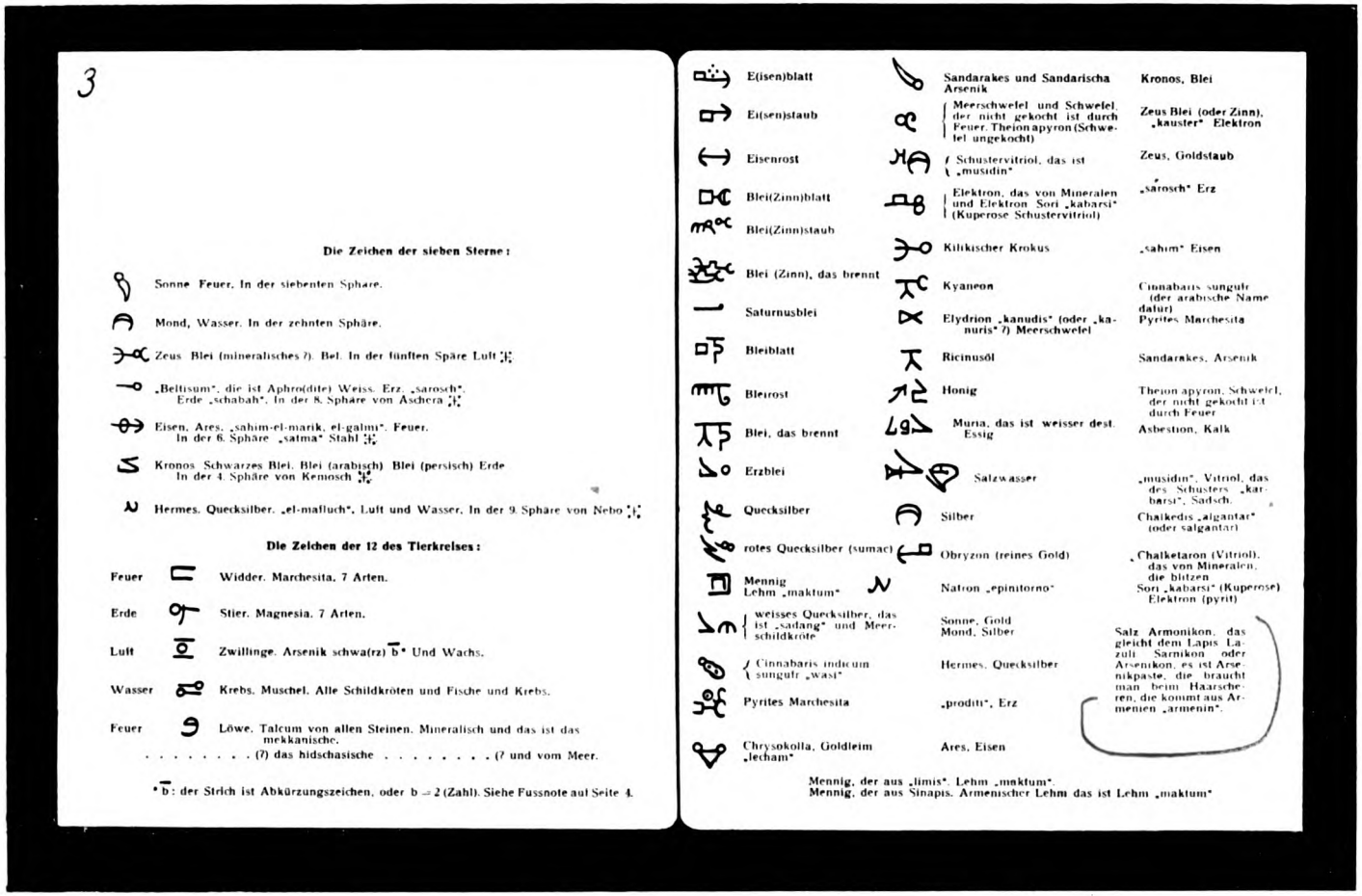

3

**Die Zeichen der sieben Sterne:**

Sonne. Feuer. In der siebenten Sphäre.

Mond, Wasser. In der zehnten Sphäre.

Zeus. Blei (mineralisches ?). Bel. In der fünften Späre Luft

„Beltisum", die ist Aphro(dite) Weiss. Erz. „sarosch". Erde „schabah". In der 8. Sphäre von Aschera

Eisen, Ares. „sahim-el-marik, el-galmi". Feuer. In der 6. Sphäre „satma" Stahl

Kronos. Schwarzes Blei. Blei (arabisch). Blei (persisch) Erde. In der 4. Sphäre von Kemosch

Hermes. Quecksilber. „el-mafluch". Luft und Wasser. In der 9. Sphäre von Nebo

**Die Zeichen der 12 des Tierkreises:**

| | | |
|---|---|---|
| Feuer | | Widder. Marchesita. 7 Arten. |
| Erde | | Stier. Magnesia. 7 Arten. |
| Luft | | Zwillinge. Arsenik schwa(rz) $\bar{b}$* Und Wachs. |
| Wasser | | Krebs. Muschel. Alle Schildkröten und Fische und Krebs. |
| Feuer | | Löwe. Talcum von allen Steinen. Mineralisch und das ist das mekkanische. |

. . . . . (?) das hidschasische . . . . . (? und vom Meer.

* $\bar{b}$: der Strich ist Abkürzungszeichen, oder b = 2 (Zahl). Siehe Fussnote auf Seite 4.

| | | |
|---|---|---|
| E(isen)blatt | Sandarakes und Sandarischa Arsenik | Kronos, Blei |
| Ei(sen)staub | Meerschwefel und Schwefel, der nicht gekocht ist durch Feuer. Theion apyron (Schwefel ungekocht) | Zeus Blei (oder Zinn), „kauster" Elektron |
| Eisenrost | Schustervitriol, das ist „musidin" | Zeus, Goldstaub |
| Blei(Zinn)blatt | Elektron, das von Mineralen und Elektron Sori „kabarsi" (Kuperose Schustervitriol) | „sarosch" Erz |
| Blei(Zinn)staub | | |
| | Kilikischer Krokus | „sahim" Eisen |
| Blei (Zinn), das brennt | Kyaneon | Cinnabaris sungufr (der arabische Name dafür) |
| Saturnusblei | Elydrion „kanudis" (oder „kanuris" ?) Meerschwefel | Pyrites Marchesita |
| Bleiblatt | Ricinusöl | Sandarakes, Arsenik |
| Bleirost | Honig | Theion apyron, Schwefel, der nicht gekocht ist durch Feuer |
| Blei, das brennt | Muria, das ist weisser dest. Essig | Asbestion, Kalk |
| Erzblei | Salzwasser | „musidin", Vitriol, das des Schusters „karbarsi", Sadsch. |
| Quecksilber | Silber | Chalkedis „algantar" (oder salgantar) |
| rotes Quecksilber (sumac) | Obryzon (reines Gold) | „Chalketaron (Vitriol), das von Mineralen, die blitzen |
| Mennig<br>Lehm „maktum" | Natron „epinitorno" | Sori „kabarsi" (Kuperose) Elektron (pyrit) |
| weisses Quecksilber, das ist „sadang" und Meerschildkröte | Sonne, Gold<br>Mond, Silber | Salz Armonikon, das gleicht dem Lapis Lazuli. Sarnikon oder Arsenikon, es ist Arsenikpaste, die braucht man beim Haarscheren, die kommt aus Armenien „armenin". |
| Cinnabaris indicum<br>sungufr „wasi" | Hermes, Quecksilber | |
| Pyrites Marchesita | „proditi", Erz | |
| Chrysokolla, Goldleim „lecham" | Ares, Eisen | |

Mennig, der aus „limis". Lehm „maktum".
Mennig, der aus Sinapis. Armenischer Lehm das ist Lehm „maktum"

Fig. 7a. Deutsche Übersetzung der syrischen Handschrift (Fig. 7).

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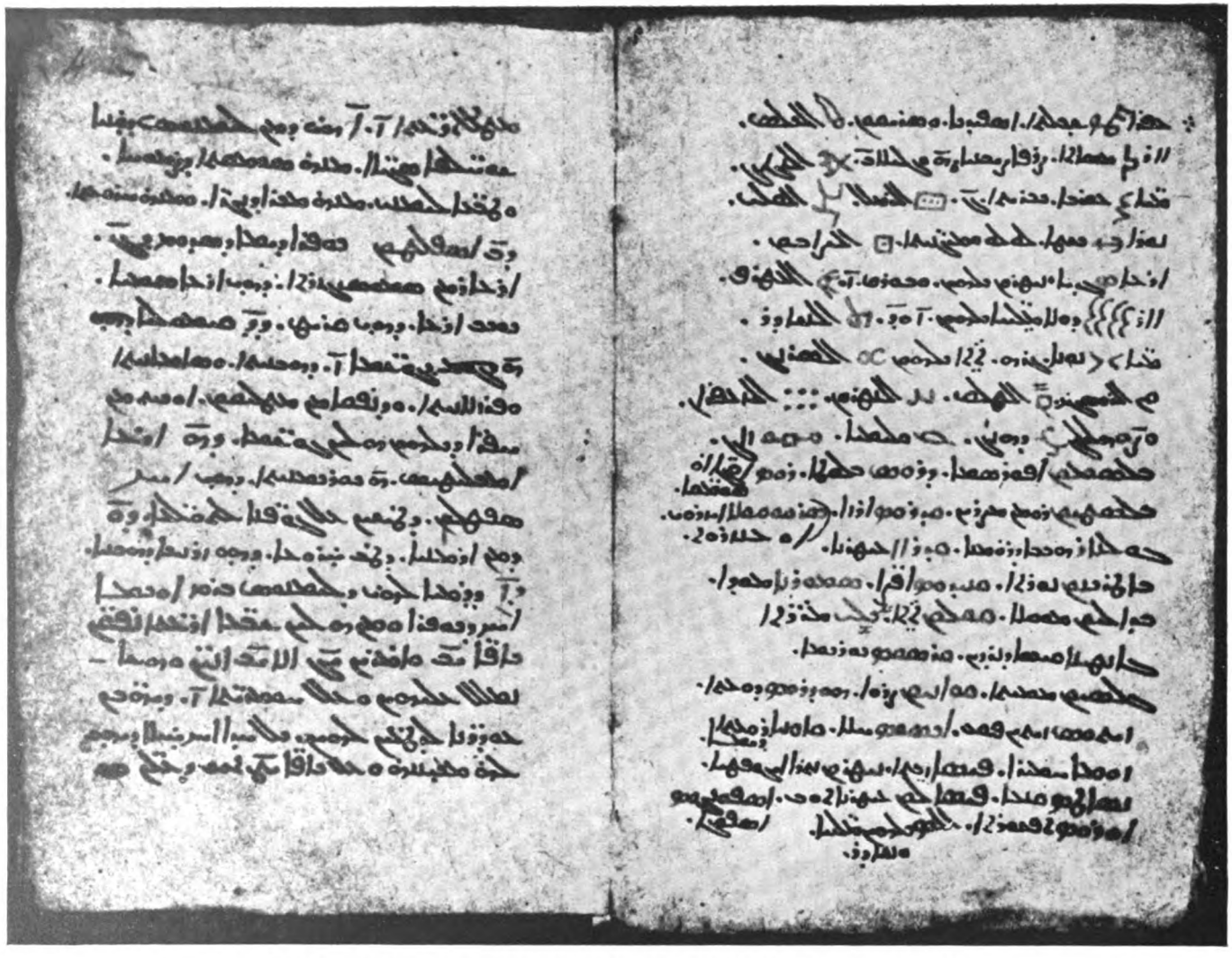

Fig. 8. Aus der syrischen Alchemistenhandschrift im British Museum in London.

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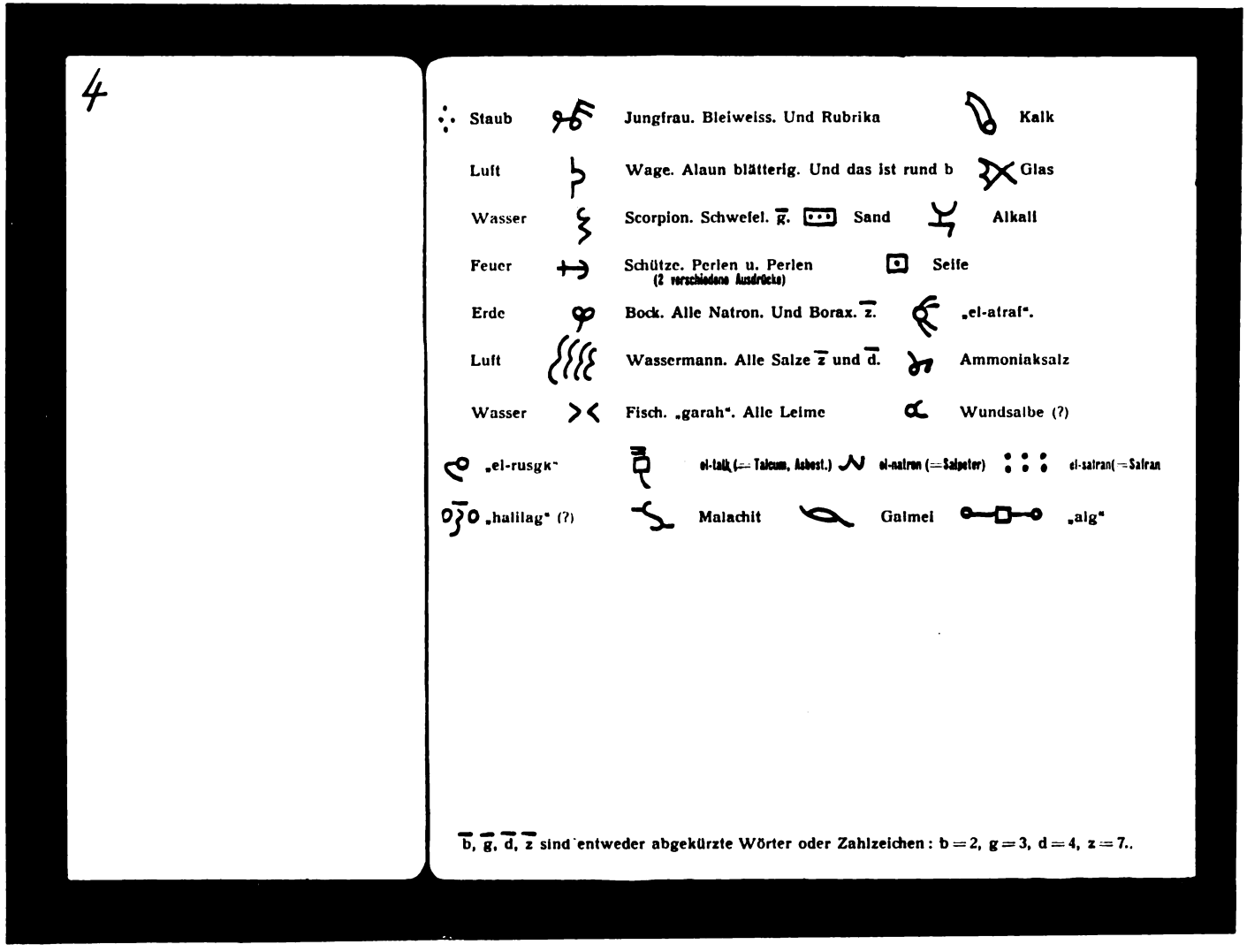


Fig. 8a. Deutsche Übersetzung der mit Zeichen versehenen Teile der syrischen Handschrift (Fig. 8).

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Dann folgen zunächst zwei Zeilen mit Zeichen und — zum Teil mir unverständlichen — Bedeutungsangaben. Der Rest dieser Kolumne rechts der Seite 4 enthält griechische Wörter mit ihren syrischen Übersetzungen.

Die letzte Kolumne (Seite 4, links, mit der Zahl 4) enthält zuerst die Aufzählung der „7 Erden" (d. h. Erdarten) mit allerlei Angaben darüber. Und schließt dann: „Aus diesen 7 Erden gehen die 12 (andere sagen 13; es sind aber nur 12) Steine hervor. Und jetzt wollen wir über sie reden und über die 7 Amulette (Gemmen), die Hilfe geben dem, der sie trägt. Und weiter über die 19 Steine, die hineingehen. . .:" Mitten im Satze endet diese letzte Kolumne, kann also — übrigens auch wegen der eben gemachten Ankündigung, deren Ausführung nicht mehr vorliegt — nicht der Schluß gewesen sein.

## Zu meiner Übertragung.

Der Text ist — wie üblich — nur mit Konsonanten geschrieben, mit einzelnen, nicht eindeutigen, Vokalandeutungen. Die Schrift ist teilweise nicht leicht leserlich. Erschwert wird die Entzifferung natürlich auch dadurch, daß das meiste nicht zusammenhängende Sätze sind, sondern nur einzelne Wörter, überdies vielfach ungebräuchliche, künstliche Fachbezeichnungen und technische Ausdrücke. Dazu sind es oft Wörter aus verschiedenen andern Sprachen, die z. T. nur unvollkommen in syrischer Schrift wiedergegeben werden konnten.

In „ . . ." habe ich die Wörter geschrieben, deren Bedeutung ich nicht kenne und ebensowenig, welcher Sprache sie angehören. In diesem Falle habe ich die syrische Konsonantenschrift transskribiert und die mutmaßlichen oder möglichen, aber durchaus nicht sicheren Vokale beigefügt.

In (. . . .) habe ich hie und da eigene Übersetzungen, Erläuterungen oder Vermutungen beigegeben.

Es ist von großem Interesse an dieser Stelle auch eine Seite der von Berthelot erschlossenen griechischen Handschrift zu reproduzieren. Das Manuskript, dem diese Seite entstammt, entstand um das Jahr 1000 und wird in der Bibliothek San Marco in Venedig aufbewahrt. Das Manuskript gibt aber eine noch viel ältere Abhandlung wieder. Der Titel lautet nach Berthelot: „Metallisches und chemisches Buch über Arbeiten des Goldes, des Silbers und über die Befestigung des Quecksilbers. Dieses Buch behandelt den Dampf, metallische Färbungen und Giessen von Bronze, ebenso Färbungen der grünen Steine, der Granaten und anderer Steine in allen Farben und Perlen, und der Färbungen des Lederzeuges für den Kaiser mit Krapp. Alle diese Dinge sind mit den Salzwassern und dem philosophischen Ei mittels der Metallkunst erzeugt".

Es handelt sich offensichtlich um eine chemisch-technische Abhandlung. Die nachfolgende Übertragung des Textes, der schon bei Berthelot veröffentlichten Tafel (Fig. 9) verdanken wir den freundschaftlichen Bemühungen von Herrn Dr. Döttling, Altphilologe in Burgdorf; wir geben die Übersetzung in der gleichen Reihenfolge wie die Tafel sie verwendet:

| | | |
|---|---|---|
| Spalte 1 | *Χρυσος* | Gold |
| | *Χρυσου ριγμα* | Goldspäne |
| | *Χρυσου πεταλα* | Goldblätter |
| | *Χρυσος κεκαυμενος* | Gebranntes Gold |
| | *Χρυσελεφαντον* | Goldelfenbein |
| | *Χρυσοπολλα* | Goldloth |
| | *Μελαγμα χρυσου* | Goldschmelze |

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| | | |
|---|---|---|
| | Αργυρος | Silber |
| | Αργυρου γη | Silbererde |
| | Αργυρου ριυημα | Silberspäne |
| | Αργυρου πετολα | Silberblätter |
| | Αργυροχρυσοκολλα | Silberloth |
| | Αργυρος κεκαυμενος | Gebranntes Silber |
| | Χαλκος κυπριος | Cyrisches Erz |
| | Χαλκου γη | Erzerde |
| | Χαλκου ριυημα | Erzspäne |
| | Χαλκου πεταλα | Erzblätter |
| | Χαλκος κεκαυμενος | Gebranntes Erz |
| | Ιος χαλκου | Erzrost |
| | Οριχαλκος | Messing |
| | Σιδηρος-Αλλως | Eisen-bloß |
| | Σιδηρου γη | Eisenerde |
| | Σιδηρου ριυημα | Eisenspäne |
| | Σιδηρου πεταλον | Eisenblatt |
| | Σιδηρου ιος | Eisenrost |
| | Μολιβος | Blei |
| Spalte 2 | Ηλιος χρυσος | Sonne, Gold |
| | Σελιυη αργυρος | Mond, Silber |
| | Κρονος φαινων μολιβος | Kronos, Saturn, Blei |
| | Ζευς φαεθων ηλεκτρος | Zeus, Phaethon, Bernstein |
| | Αρης πυροεις σιδηρος | Ares, Planet, Eisen |
| | Αφροδιτη φωσφορος χαλκος | Aphrodite, Planet, Erz |
| | Ερμης στιλβων κασσιτηρος | Hermes, Planet, Eisen |
| | Μολιβδου γη | Bleierde |
| | Μολιβδοχαλκος | Bleierz |
| | Μολιβδου ριυημα | Bleispäne |
| | Μολιβδος κεκαυμερος | Gebranntes Blei |
| | Κασσιτηρος-Αλλο | Zinn-bloß |
| | Κασσιτηρου γη | Zinnerde |
| | Κασσιτηρου ριυημα | Zinnspäne |
| | Κασσιτηρου πεταλα | Zinnblatt |
| | Κασσιτηρος κεκαυμενος | Gebranntes Zinn |
| | Υδραργυρος | Quecksilber |
| | Νεφελη | Schwefelasche |
| | Λευκην παγεισαν | Weiß, fest |
| | Ξανθην παγεισαν | Gelb, fest |
| | Λιθαργυρος | Silberglätte |
| | Θειον απυρον | Ungebrannter Schwefel |
| | Θειον θεια | Schwefel |
| | Θειον αθικτον | Reiner Schwefel |
| | Αφροσελιγον | Selenit |

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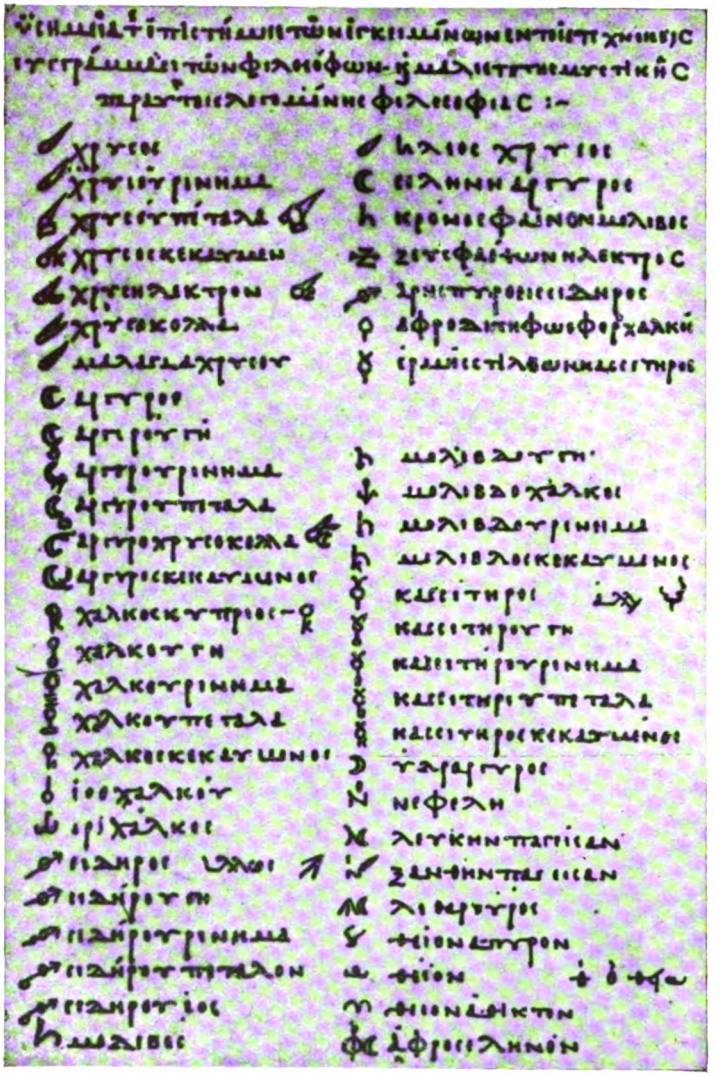
Auf dieser griechischen Tafel ist eine gewisse Systematik in der Schreibweise der Zeichen ohne weiteres ersichtlich. Überall, wo z. B. (Metall) Blatt bezeichnet werden soll, geschieht das durch ein Anfügen eines Vierecks an das Zeichen des Metalles (Metall), Späne werden durch zwei parallele



Typonreproduktion: Lüdy

Fig. 9.

Griechische Alchemisten-Handschrift in der Bibliothek San Marco in Venedig (aus Berthelot, Chemie im Altertum und Mittelalter).

Strichlein angedeutet u. s. w. Für uns von besonderer Bedeutung ist die Tatsache, daß eine ganze Anzahl Zeichen, schon dieser einzigen Tafel genau gleich oder nur mit unwesentlichen Veränderungen versehen in den mittelalterlichen Zeichentafeln uns wieder entgegentreten.

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Von den griechischen Zeichen sind es diejenigen für Gold, Goldloth (im Mittelalter für Marcasita), Silber, Erzerde (im Mittelalter für Aes ustum), Erzspäne (im Mittelalter für Aes ustum und Cuprum), Eisen, Eisenspäne, Sonne, Mond Quecksilber etc., die in den mittelalterlichen Tafeln genau gleich, höchstens um 90° gedreht, wieder zu finden sind.

Dieselbe Beobachtung machen wir mit den syrischen Tafeln. Auch auf ihnen finden wir eine hübsche Anzahl Zeichen, die fast unverändert übernommen worden sind, so z. B. die Symbole für Wage, Schütze, Fische, Sonne, Mond, Krebs, Tag, Nacht (also vorwiegend astrologische Zeichen), dann auch für Eisen, Silber, kilikischer Krokus und Wasser.

Unter geringfügigen Veränderungen und kleinen Zusätzen lassen sich aus anderen Zeichen der syrischen oder der griechischen Tafeln ohne große Mühe ihre mittelalterlichen Bilder ableiten, so das syrische „Kalk", das im Mittelalter ♆ heißt, das griechische Metall-Blatt, das im Mittelalter ebenfalls mit einem Viereck angedeutet wird, das griechische „Blei", das im Mittelalter ♄ geschrieben wird, das griechische „Erz", das in ♀ umgewandelt erscheint, das griechische „Zinn", das später als ☿ Quecksilber bedeutet und andere mehr.

Die Grundlagen der mittelalterlichen Zeichen sind also zweifellos schon bei den Griechen zu suchen. Wie bereits erwähnt, waren die syrisch-byzantinischen Gelehrten die Erben griechischer Wissenschaft. Von diesen übernahmen die Araber die Alchimie und erst durch die Berührung mit der arabischen Kultur in Spanien erhielt im 12. und 13. Jahrhundert das Abendland die alchimistische Lehre. Auch die Zeichen der Alten müssen auf diesem Wege zu uns gekommen sein. Dadurch, daß sie von einer Handschrift in die andere hinüberkopiert wurden, erklären sich auch leicht die kleinen Veränderungen der Schreibweise.

Wie alle Wissenschaften so erhielt auch die Alchimie mächtige Impulse durch den Humanismus. In diesem wunderbaren Zeitalter begnügte man sich nicht mehr mit den im Laufe der Zeiten mehr oder minder verwässerten Traditionen, man stieg zu den Urquellen hernieder und las die Schriften in den Ursprachen. Auf religiösem vor allem, dadurch frei gemacht auch auf medizinischem und naturwissenschaftlichem Gebiete, erwachte neues Leben. Die Erfindung des Buchdruckes förderte diesen Geist mächtig, und es ist nicht von Ungefähr, daß auch das, was wir heute unter „alchimistischen Zeichen" verstehen um diese Zeit herum erst recht an Bedeutung gewann. Angeregt durch die Lektüre der Urschriften und genötigt durch die Furcht vor der drohenden Verpopularisierung der Wissenschaften durch den Buchdruck verschanzte man sich mit seinen mehr oder weniger wichtigen Geheimnissen und Künsten hinter einen großen Schutzwall von Symbolen. Bisher hatten die Zeichen nur den Charakter von Abkürzungen, jetzt erhielten sie noch denjenigen des Schutzes. Um die Behütung des geistigen Eigentums noch mehr zu sichern, begnügte man sich nicht mit einem Symbol für ein Objekt, sondern gar häufig bezeichnete man mit 30—40 Zeichen denselben Körper.

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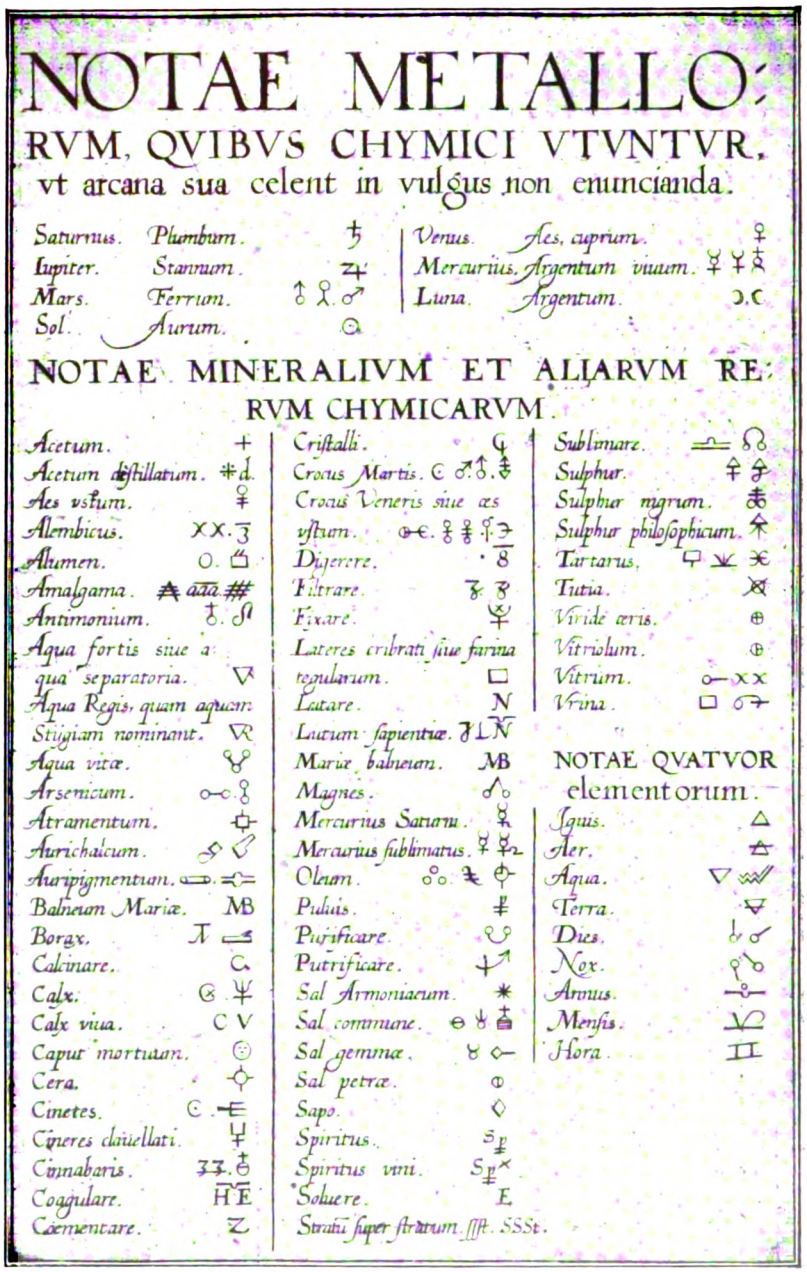
Diese Erscheinung können wir nur als Schutzmaßnahme erklären. Eine eindeutige Bestätigung dieser Ansicht finden wir übrigens in der Überschrift zu der Zeichentabelle, die in der Kölner Pharmakopöe von 1628 (Fig. 10) zu finden ist, wo mit größter Offenherzigkeit gesagt wird:



NOTAE METALLO:
RVM, QVIBVS CHYMICI VTVNTVR,
vt arcana sua celent in vulgus non enuncianda.

Saturnus. Plumbum.
Iupiter. Stannum.
Mars. Ferrum.
Sol. Aurum.
Venus. Aes, cuprum.
Mercurius. Argentum viuum.
Luna. Argentum.

NOTAE MINERALIVM ET ALIARVM RE:
RVM CHYMICARVM.

Acetum.
Acetum distillatum.
Aes vstum.
Alembicus.
Alumen.
Amalgama.
Antimonium.
Aqua fortis siue aqua separatoria.
Aqua Regis, quam aquam Stiigiam nominant.
Aqua vitæ.
Arsenicum.
Atramentum.
Aurichalcum.
Auripigmentum.
Balneum Mariæ.
Borax.
Calcinare.
Calx.
Calx viua.
Caput mortuum.
Cera.
Cinetes.
Cineres clauellati.
Cinnabaris.
Coagulare.
Cœmentare.
Cristalli.
Crocus Martis.
Crocus Veneris siue æs vstum.
Digerere.
Filtrare.
Fixare.
Lateres cribrati siue farina tegularum.
Lutare.
Lutum sapientiæ.
Mariæ balneum.
Magnes.
Mercurius Saturni.
Mercurius sublimatus.
Oleum.
Puluis.
Purificare.
Putrificare.
Sal Armoniacum.
Sal commune.
Sal gemmæ.
Sal petræ.
Sapo.
Spiritus.
Spiritus vini.
Soluere.
Stratū super stratum.
Sublimare.
Sulphur.
Sulphur nigrum.
Sulphur philosophicum.
Tartarus.
Tutia.
Viride æris.
Vitriolum.
Vitrum.
Vrina.

NOTAE QVATVOR elementorum.

Ignis.
Aer.
Aqua.
Terra.
Dies.
Nox.
Annus.
Mensis.
Hora.

Fig. 10. Tabelle der alchimistischen Zeichen.
Aus der Kölner Pharmakopöe von 1628.
Abgedruckt in: „Die Kölner Apotheken" von Alfred Schmidt.
Aus illustr. Apotheker-Kalender 1927 (Herausgeber: F. Ferchl, Mittenwald).

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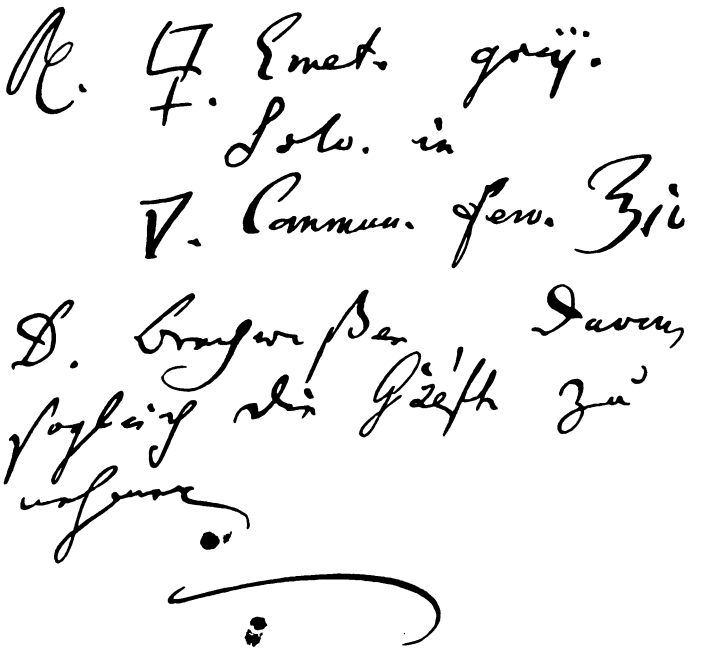
„Metallzeichen, die die Chemiker verwenden, um ihre Geheimnisse, die nicht ins Volk dringen sollen, zu verbergen".

Wohl mag zugegeben werden, daß viel, sehr viel, Schwindel und Hokuspokus in der Alchimie des Mittelalters getrieben wurde, man denke nur an die vielen Fürstenhöfe, die aus Geldnot irgend einem raffinierten „Goldmacher" zum Opfer fielen, sicher aber hat auch manch ernsthafter Sucher, dem Stein der Weisen nachforschend, ungewollt Entdeckungen gemacht und diese mit Hilfe der geheimnisvollen Zeichenschrift vor unbe-



Aus dem 18. Rechenschaftsbericht des Schwäbischen Schillervereins, Marbach 1914.

Fig. 11. Ein Rezept von Schillers Hand
aus dem Schillermuseum in Marbach, das früher Züricher Privatbesitz war.

In dem Rezept werden verschrieben 3 Gran Tartarus emeticus (Brechweinstein), gelöst in 4 Unzen heißen Wassers. Es stammt wohl aus der Zeit von Schillers militärärztlicher Tätigkeit in Stuttgart.

Aus illustr. Apotheker-Kalender 1925 (Herausgeber: F. Ferchl, Mittenwald).

rufenen Händen zu bewahren gesucht. Denn damals gab es keinen Schutz für geistiges Eigentum, das sehen wir nirgends krasser, als bei den Kräuterbüchern jener Zeit, die offensichtlich einer dem andern einfach nachdruckte.

Es ist also ganz verfehlt, das Wesen der geheimnisvollen Zeichen einfach als Hilfsmittel zu Lug und Trug darstellen zu wollen.

Auch Medizin und Pharmazie bemächtigten sich der alchemistischen Zeichen, und zwar so intensiv, daß auf Rezepten und Gefäßaufschriften diese Symbole erst in neuerer Zeit verschwanden. Ein Rezept von Schillers Hand (Fig. 11) und einige Apothekengefäße mit besonders charakteristischen Aufschriften (Fig. 12—21) mögen das belegen. Man beobachte, daß die

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Aus dem Landesmuseum zu Darmstadt. Phot. Lüdy

Fig. 12. Glasgefäße aus dem 18. Jahrhundert.

Die Gefäße enthielten: Flores salis ammoniaci simplices (Ammonium chloratum). — Tartarus vitriolatus (Kalium sulfuricum). — Pulvis confortans (ein herzstärkendes Pulver). — Aethiops antimonialis (Hydrargyrum stibiato-sulfuratum). — Vitrum antimonii (Antimonium crudum).

Aus illustr. Apotheker-Kalender 1928 (Herausgeber: F. Ferchl, Mittenwald).

Aus dem Landesmuseum zu Darmstadt Phot. Lüdy

Fig. 13. Schmelzmalerei-Glasgefäße aus dem Anfang des 18. Jahrhunderts.

Die Gefäße tragen die Aufschrift: Ebur sine igne praeparatum. — Spiritus salis ammoniaci volatilis. — Spiritus salis ammoniaci. — Spiritus Nitr. dulcis. — Cinnabaris antimonii praeparata.

Aus illustr. Apotheker-Kalender 1928 (Herausgeber: F. Ferchl, Mittenwald).

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Phot. Lüdy

Landesmuseum Zürich.

Fig. 14. Standgläser.

Elixir vitrioli Mynsichti | Spiritus vini rectificatus | Tinctura Rhei aquosa

Phot. Lüdy

Landesmuseum Zürich.

Fig. 15. Standgläser.

Tinctura antimonii tartarisata | Spiritus salis (comunis acidus) | Spiritus Melissar



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Style der Bemalungen auf 17. und 18. Jahrhundert hinweisen, also auf eine Zeit, in der die wissenschaftliche Chemie sich längst ganz anderer Schreibweisen bediente (Lavoisier, Dalton, Berzelius). Für medizinischen und pharmazeutischen Gebrauch scheinen also die alten Zeichen ihren Zweck recht gut erfüllt zu haben. Einige der Zeichen sind ja noch heute der älteren Generation Apotheker bekannt!

Phot. Lüdy

Fig. 16. Milchglasgefäße im Landesmuseum Zürich.

Spiritus salis ammoniatus anisatus — Spiritus Cornu Cervi

Nicht ganz ohne Spott weist Walden[9]) darauf hin, daß die wissenschaftliche Chemie sich der alchimistischen Zeichen möglichst enthielt, daß diese vielmehr nur von Heimlichtuern, Goldmachern und -Apothekern gebraucht wurden. Dieser Spott ist durchaus verfehlt. Ein ärztliches Rezept soll keine chemische Abhandlung bieten, es soll nur möglichst rasch eine Verständigung zwischen Arzt und Apotheker herstellen. Bei der verhältnismäßig kleinen Zahl von Chemikalien, die in der damaligen Rezeptur verwendet wurde, genügten die kleinen, bescheidenen Zeichen vollständig für diesen Zweck. Und nicht zu unterschätzen war der Umstand, daß ein

[9]) loc. cit.

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Aus dem Besitze Dr. Winkler, Innsbruck.

Fig. 17. Glasstandgefäße des 17. Jahrhunderts. (Später, etwa 1730 übermalt).
Species pro Theriaca smaragdina — Castoreum verum — Sulfur antimonii auratum, primum praecipitatum.
Aus illustr. Apotheker-Kalender 1927 (Herausgeber: F. Ferchl, Mittenwald).

Sammlung Heinrici, Halle a. d. S.

Fig. 18. Glasstandgefäße aus der ersten Hälfte des 18. Jahrhunderts.
Sacch. Saturni — Plumb. acetic. — Flores salis armoniaci martiales — Ammonium chlorat. ferrat. — Pulv. Tartari vitriolati praeparatus = Kalium sulfuricum = Tartarus vitriolatus Tackenii. — Sulphur auratum antimonii = Stib. sulfurat. aurant.
Aus illustr. Apotheker-Kalender 1926 (Herausgeber: F. Ferchl, Mittenwald).

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Fig. 19. Flaschen aus dem Landesmuseum Darmstadt.

Oleum Chamomillae coctum. — Spiritus cornu cervi volatilis. — Spiritus salis ammoniaci causticus (volatilis). — Cornu cervi ustum praeparatum. — Oleum petrae nigrum.

Phot. Lüdy

Fig. 20. Milchglasgefäße aus dem Historischen Museum Bern.

Tinctura antimonii tartarisata. — Spiritus sulphuris per campanam. — Spiritus vitrioli. — Spiritus vitrioli.

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derartig geschriebenes Rezept sowohl, als auch die Aufschriften in den Apotheken für das Publikum unverständlich waren. Wer eine Ahnung von der Psyche des Kranken hat, der weiß, daß zwischen Arzt und Patient ein Vertrauensverhältnis unbedingt nötig ist. Durch nichts wird aber dieses Zutrauen zum Arzt mehr geschädigt, als durch die heute vielfach übliche, mechanische Verordnung irgend einer Fabrikmedizin, deren Namen dem Patienten längst bekannt ist, und die vielleicht schon vorher, ohne Arzt mit mehr oder weniger Erfolg versucht worden ist. Die Geheimnistuerei in der alten Rezeptur bezweckte nicht, dem Kranken etwas „vor-

Phot. Lüdy

Fig 21. Standgefäße aus dem Historischen Museum Bern.

Spiritus cornu cervi rectificatus — Spiritus salis dulcis — Elixir vitrioli Mynsichti — Ol. vitrioli — Spiritus nitri dulcis.

zumachen", sondern sie war ein weises Zusammenwirken von Naturwissenschaft und Psychologie, mit dem einzigen Ziel, möglichst vollkommener Krankheitsheilung. Ein mit Zeichen geschriebenes Rezept unterstützte dieses Zusammenwirken außerordentlich.

Der Wertschätzung der alchimistischen Zeichen in Medizin und Pharmazie entsprechend wurden dieselben in zahlreichen pharmazeutischen Büchern der damaligen Zeit, zu Tafeln geordnet, immer wieder aufs Neue zusammengestellt. Als Beispiel mag die schon erwähnte Kölner Pharmakopöe von 1628 dienen (Fig. 10). Auffällig auf dieser Tafel ist der Umstand, daß sie höchstens 3—4 Zeichen für eine Substanz gibt. Das Blatt macht einen scharfen Unterschied zwischen den als Metalle anerkannten und den übrigen Chemikalien. Jedes Metall wurde als zu einem Planeten gehörig



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betrachtet, daher stehen überall vor den Metallnamen diejenigen von Planeten. Eine hübsche Zusammenstellung von alchemistischen Zeichen finden wir in Lemery's „Cours de Chymie“ [10]), worin allerdings nur die gebräuchlichsten Symbole angeführt werden (Fig. 22).

Daß aber auch die Geheimzeichen den gelehrten Stand nicht unbedingt vor Eindringlingen schützen konnten beweist eine von Hand ge-

Phot. Lüdy

Fig. 22. Zeichentabelle aus „Cours de Chymie“ von N. Lemery.

schriebene Zeichentabelle, die im Landesmuseum zu Darmstadt aufbewahrt wird (Fig. 23). Mit rührender Mühe hat sich der „barbirs-geselle“ J. Ch. Wachter im Jahre 1705 dies Blatt zusammengeschrieben. Daß er sich dazu bemüßigt fühlte, ist nicht einmal sehr erstaunlich, denn die „Bartscherer“, die „Bader“ (in den Badstuben) und die Vorläufer unserer heutigen Chirurgen, die „Wundärzte“, standen sich früher recht nahe. Die Bader und noch mehr die Barbiere übten die „niedere Chirurgie“ aus,

[10]) Cours de Chymie oder: Der vollkommene Chymist, welcher . . . . . etc. von Niclas Lemery. Deutsche Übersetzung. (Herausgeber und Jahrzahl sind herausgeschnitten, das französische Exemplar kam 1675 heraus. Lemery lebte 1645—1715.) Aus der Schweizerischen Sammlung für historisches Apothekenwesen an der pharm. Anstalt der Universität Basel (Vorsteher: P. D. Dr. Häfliger).

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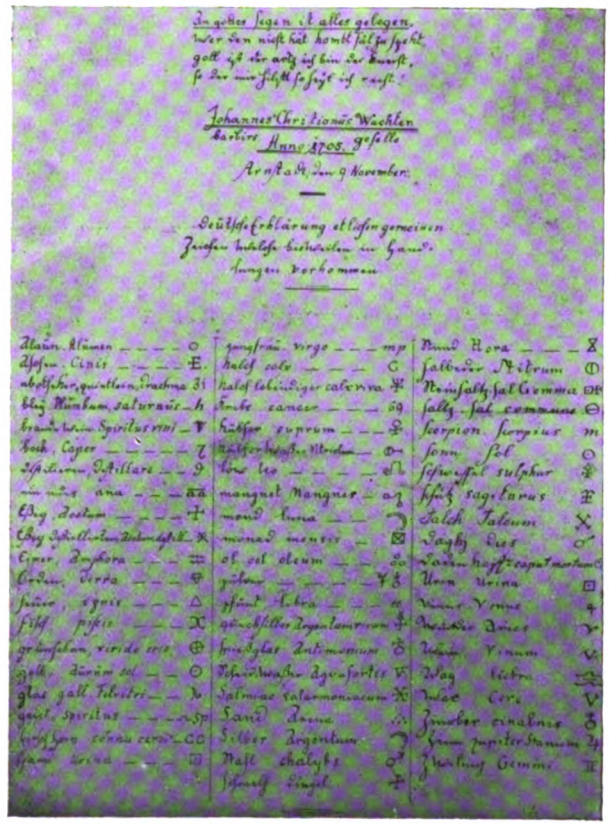
während die Wundärzte die chirurgischen Eingriffe, in schweren Fällen unter Beisein eines Arztes, besorgten. [11])

Angesichts dieser nahen Verwandtschaften ist es erklärlich, daß ein Barbier sich mit alchimistischen Zeichen befaßte und sich die wichtigsten notierte. Die „Handlungen", von denen er auf seiner Tafel schreibt, waren zu vergleichen mit unsern Groß-Drogenhäusern. Sie verkehrten mit den Apothekern einerseits, den Handelsplätzen der fernen Länder andererseits. Der Inhaber einer solchen Handlung war ein sehr angesehener



Landesmuseum zu Darmstadt. Phot. Lüdy

Fig. 23. Handgeschriebenes Verzeichnis der wichtigsten alchemistischen Zeichen.

Mann, der vieles wissen mußte (vergl. Vorrede zu Neu-vielvermehrte und verbesserte Teutsche Material-Kammer . . . von J. J. Marxen, Nürnberg, Verlag J. Zieger 1709).

Das berühmteste Werk, das sozusagen das gesamte Wissen der damaligen Pharmazie in sich vereinte, war das Lexikon von Sommerhoff[12]).

[11]) Vergl. Peters, Der Arzt, pag. 78 (Die deutschen Stände in Einzeldarstellungen, Eugen Diederichs Verlag in Jena, 1924).

[12]) Lexicon pharmacevtico chymicvm. . . . . Editio novissima, Avtore Johann. Christoph. Sommerhoff, Pharmacopoeo Neo-Hanoviensi. Norimbergae, Impensis Joh. Friderici Rüdigeri. Anno MDCCXIII. (Im Besitz von P. D. Dr. Winkler, Innsbruck).

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Nach dem Titelblatt bringt Sommerhoff sein eigenes Bild (Fig. 24). Man sieht es dem klugen Gesicht und den kultivierten Händen an, daß man es mit einem Manne bester Geistesbildung zu tun hat. Am Schluß seines Werkes, das einst für den Apotheker, heute für den Pharmaziehistoriker eine Fundgrube, ein nie versiegender Auskunftgeber ist, befin-

Phot. Lüdy

Fig. 24. SOMMERHOFF.

Johann Christoph Sommerhoff, Apotheker „Zum Engel" in Neu-Hanau, geboren am 3. Jänner 1644, verfaßte ein Lexicon pharmaceutico-chymicum, das zu Nürnberg im Jahre 1701 gedruckt und 1713 dort neu aufgelegt wurde. Das Bild, der zweiten Auflage entnommen, ist von I. D. Welker gezeichnet und von A. Bauer gestochen. Sommerhoff, welcher natürlich verschiedene Werke, wie er selbst angibt, zu seiner Arbeit benützte, hat in diesem Buche fast das ganze pharmazeutische Wissen seines Zeitalters zusammengefaßt.

Aus illustr. Apotheker-Kalender 1928.

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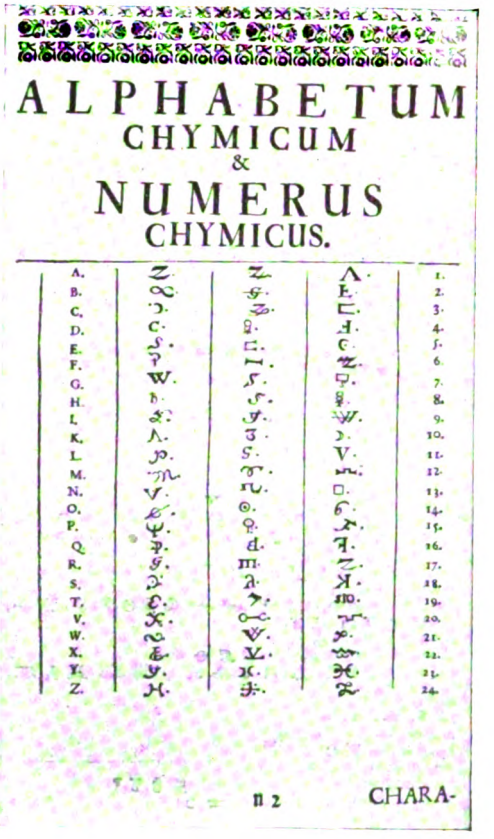
den sich, auf 15 Seiten zusammengedrängt, alphabetisch geordnet eine Unmenge alchimistischer Zeichen. Eingeleitet wird dies Verzeichnis mit einem „Alphabetum chymicum“ (Fig. 25). Über den Zweck dieses Alphabetes äußert sich Sommerhoff nirgends. Wir vermuteten, daß es sich um den Schlüssel zu einer Art chiffrierter Schrift handeln müsse und erhielten vom ersten Ehrenmitglied unserer Gesellschaft, von Herrn Prof. Tschirch,




Phot. Lüdy

Fig. 25. Alphabetum Chymicum aus dem Lexicon Sommerhoff's.

auf unsere Anfrage hin folgende, liebenswürdigst erteilte Auskunft: „ . . Das Alphabetum chymicum ist eine sogenannte Geheimschrift, wie sie früher, besonders in der Medizin, üblich war. In der zweiten Reihe sind die großen, in der dritten die kleinen Buchstaben zu finden. Sie haben es richtig erraten. Die Geheimniskrämerei fängt schon Jahrtausende ante Christ. nat. an. Die „Prophetennamen“ [13]) der Ägypter sind ein Beispiel. . . .“

Dann folgen die Seiten mit den andern Zeichen, von denen wir eine Seite als Abbildung bringen (Fig. 26). Schon aus dieser Beispielsseite ist

[13]) Vergl. Tschirch, Handbuch der Pharmakognosie, 1, 2 pag. 471

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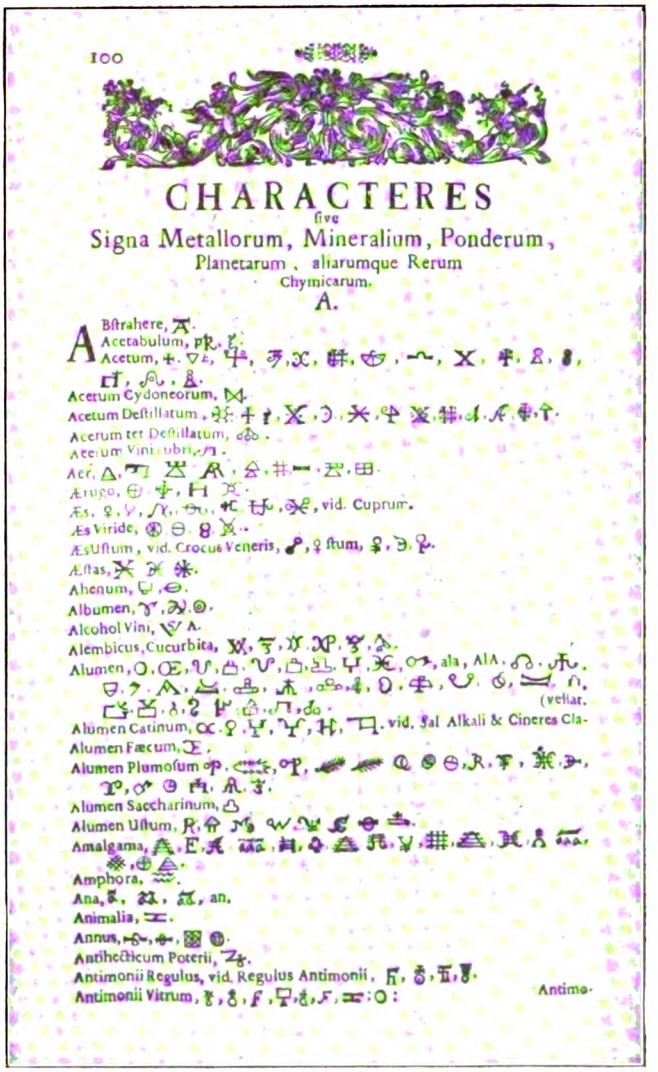
ersichtlich, wie außerordentlich mühevoll es ist, die Bedeutung eines bestimmten Zeichens nachzuschlagen, da wohl die lateinischen Worte alphabetisch geordnet sind, die Zeichen aber wahllos zusammengestellt wurden.



100

CHARACTERES
sive
Signa Metallorum, Mineralium, Ponderum,
Planetarum, aliarumque Rerum
Chymicarum.
A.

A Bitrahere,
Acetabulum,
Acetum,
Acetum Cydoneorum,
Acetum Deſtillatum,
Acetum ter Deſtillatum,
Acetum Vini ſubri,
Aer,
Æruge,
Æs, , vid. Cuprum.
Æs Viride,
Æs Uſtum, vid. Crocus Veneris, ſtum,
Æſtas,
Ahenum,
Albumen,
Alcohol Vini,
Alembicus, Cucurbita,
Alumen, ala, AlA,
(vellat.
Alumen Catinum, vid. ſal Alkali & Cineres Cla-
Alumen Fæcum,
Alumen Plumoſum
Alumen Saccharinum,
Alumen Uſtum,
Amalgama,
Amphora,
Ana, an,
Animalia,
Annus,
Antihecticum Poterii,
Antimonii Regulus, vid. Regulus Antimonii,
Antimonii Vitrum,
Antimo-

Phot. Lüdy

Fig 26. Seite aus dem Zeichenverzeichnis in Sommerhoff's Lexikon.

Ein wenig übersichtlicher ist das schon erwähnte Oraculum (vide pag. 7), das kurze Zeit nach dem Sommerhoff'schen Werke erschien. Bei näherem Zusehen entpuppt es sich deutlich als unter dem Einfluß Sommerhoff's entstanden, indem nicht nur die Reihenfolge der zusammengehörigen Zeichen meist genau gleich ist, sondern auch Unklarheiten der Zeichnung (Holzschnitte!) und Verzerrungen bei beiden Büchern an den nämlichen

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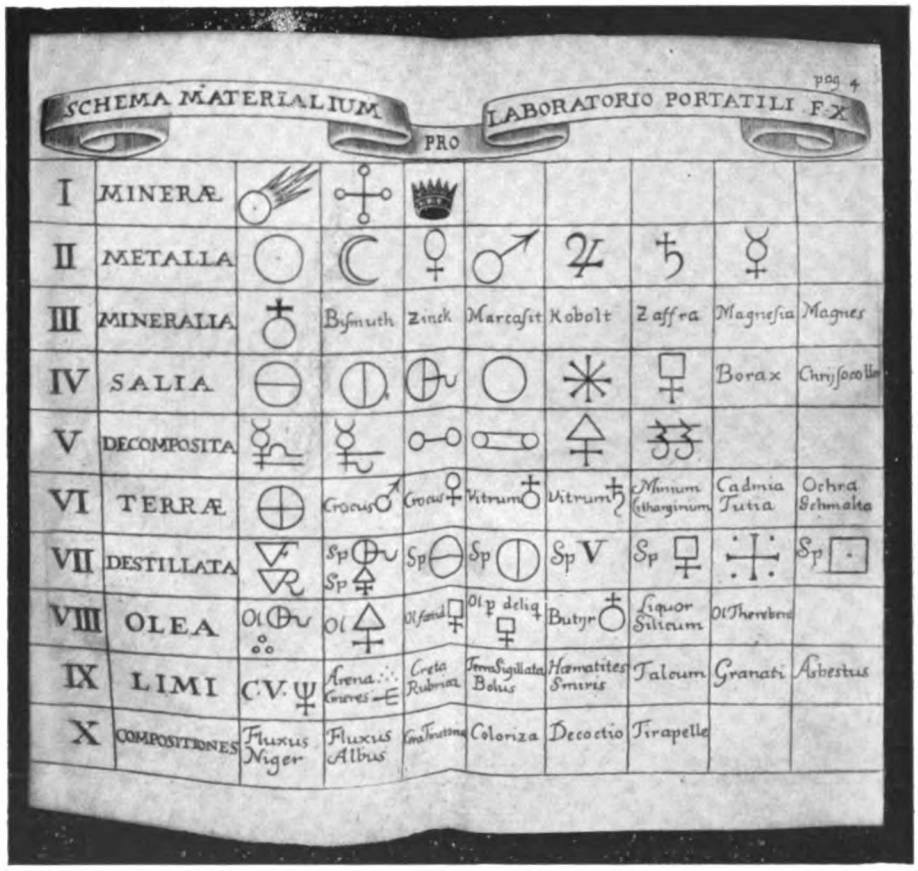
Stellen auftreten. Als Beispiel aus dem Oraculum sei eine mit Typon-Verfahren hergestellte Reproduktion beigefügt (Fig. 1).

(In diesem Zusammenhang mag ein kleiner Satzfehler dieses interessanten Büchleins richtiggestellt werden, der zu falschen Schlüssen führen könnte und in den angeschlossenen Korrekturen nicht erwähnt wird, zu Handen allfälliger Benützer des Oraculi: Auf pag. 29 gehören die Worte „solutio, solvere" vor das Zeichen „E" der 10. Zeile. Dieses und alle 14 nachfolgenden Zeichen bedeuten „solvere" und nicht „sol, aurum".)




Phot. Lüdy

Fig. 27. Tabelle aus G. G. Becher's „Opuscula chymica . . ."

Nicht ohne Berechtigung urteilt Sudhoff[14]) über das Oraculum, es sei für den Anfänger „ein mehr verwirrendes als aufklärendes Buch, weil es eine große Fülle verschiedener Zeichen für einen Stoff oder Gegenstand gibt und die gewöhnlich täglich vorkommenden in keiner Weise von den selteneren scheidet. Eine solche Scheidung scheint mir aber absolut geboten, will man wirklich praktischen Zwecken dienen und Klarheit in dem Wirrsal schaffen. . . . ." Von dem Wunsche, Ordnung in das scheinbare Chaos der Natur zu bringen zeugt die interessante Tabelle „Schema

[14]) Alchemistische Zeichen von Sudhoff, Allgemeine Zeitung, 1900, Nr. 199 (Beilage.)

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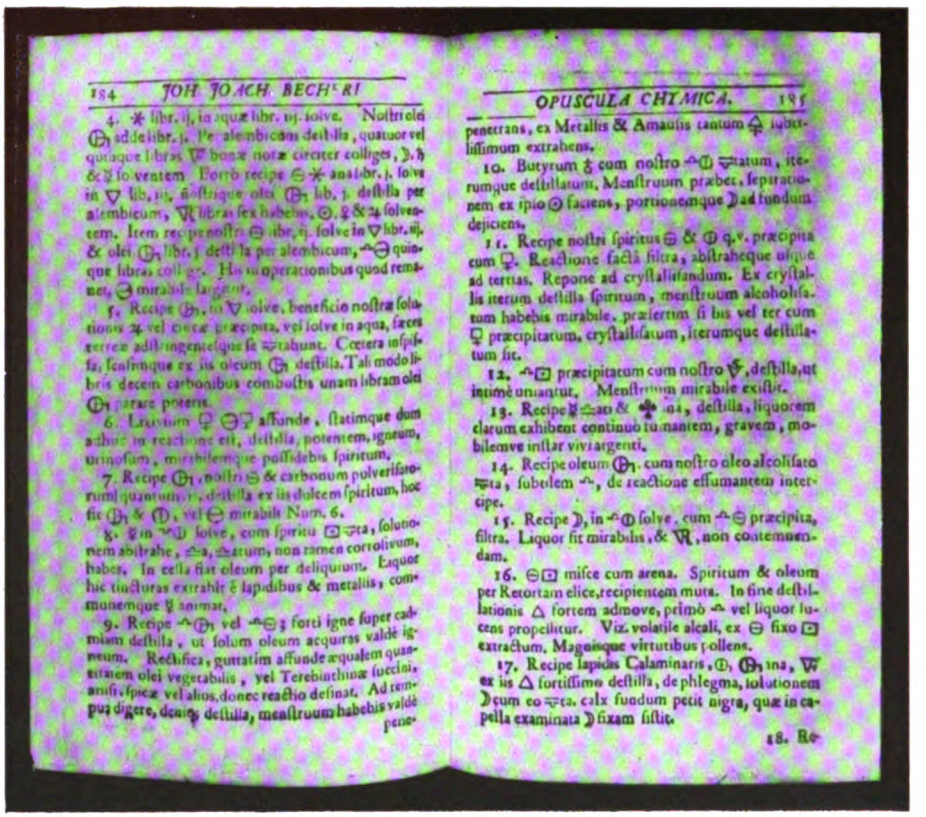
materialium" (Fig. 27) in Becher's Opuscula chymica[15]), die keiner weiteren Erläuterung bedarf. Die Schwierigkeiten, die sich dem Leser alchemistischer Schriften darbieten, mögen an Hand einer mit Symbolen gespickten Textprobe aus demselben Buch (Fig. 28), sowie einer solchen (Fig. 29) aus Becher's „Chymische Concordantz"[16]) ermessen werden.



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4. ✱ libr. ij. in aquæ libr. iij. solve. Nostri olei ⊕ adde libr. j. Per alembicum destilla, quatuor vel quinque libras ♕ bonæ notæ circiter colliges, ☽, ♄ & ☿ solventem. Porro recipe ⊖ ✱ ana libr. j. solve in ▽ lib. iij. nostrique olei ⊕ lib. j. destilla per alembicum, ♏ libras sex habebis, ☉, ♀ & ♃ solventem. Item recipe nostri ⊖ libr. ij. solve in ▽ libr. iij. & olei ⊕ libr. j. destilla per alembicum, ⌓⊖ quinque libras colliges. His in operationibus quod remanet, ⊖ mirabile largitur.

5. Recipe ⊕, in ▽ solve, beneficio nostræ solutionis ♃ vel cineæ præcipita, vel solve in aqua, fæces terreæ adstringentesque se ⌓tabunt. Cœtera inspissa, sensimque ex iis oleum ⊕ destilla. Tali modo libris decem carbonibus combustis unam libram olei ⊕ parare poteris.

6. Lixivium ♀ ⊖♀ affunde, statimque dum adhuc in reactione est, destilla, potentem, igneum, urinosum, mirabilemque possidebis spiritum.

7. Recipe ⊕, nostri ⊖ & carbonum pulverisatorum quantumvis, destilla ex iis dulcem spiritum, hoc fit ⊕ & ⊕, vel ⊖ mirabili Num. 6.

8. ☿ in ⌓⊕ solve, cum spiritu ⊡⌓ta, solutionem abstrahe, ⌓a, ⌓atum, non tamen corrosivum, habes. In cella fiat oleum per deliquium. Liquor hic tincturas extrahit è lapidibus & metallis, communemque ☿ animat.

9. Recipe ⌓⊕ vel ⌓⊖; forti igne super cadmiam destilla, ut solum oleum acquiras valdè igneum. Rectifica, guttatim affunde æqualem quantitatem olei vegetabilis, vel Terebinthinæ succini, anisi, spicæ vel alius, donec reactio desinat. Ad tempus digere, denique destilla, menstruum habebis valdè pene-

OPUSCULA CHYMICA. 185

penetrans, ex Metallis & Amausis tantum ♁ subtilissimum extrahens.

10. Butyrum ♁ cum nostro ⌓⊕ ⌓tatum, iterumque destillatum. Menstruum præbet, separationem ex ipso ☉ faciens, portionemque ☽ ad fundum dejiciens.

11. Recipe nostri spiritus ⊖ & ⊕ q. v. præcipita cum ♀. Reactione factâ filtra, abstraheque usque ad tertias. Repone ad crystallisandum. Ex crystallis iterum destilla spiritum, menstruum alcoholisatum habebis mirabile, præsertim si bis vel ter cum ♀ præcipitatum, crystallisatum, iterumque destillatum sit.

12. ⌓⊡ præcipitatum cum nostro ♈, destilla, ut intimè uniantur. Menstruum mirabile existit.

13. Recipe ☿ ⌓ati & ♣ ana, destilla, liquorem clarum exhibent continuò fumantem, gravem, mobilemve instar vivi argenti.

14. Recipe oleum ⊕, cum nostro oleo alcolisato ⌓ta, subtilem ⌓, de reactione effumantem intercipe.

15. Recipe ☽, in ⌓⊕ solve, cum ⌓⊖ præcipita, filtra. Liquor fit mirabilis, & ♏, non contemnendam.

16. ⊖⊡ misce cum arena. Spiritum & oleum per Retortam elice, recipientem muta. In fine destillationis △ fortem admove, primò ⌓ vel liquor lucens propellitur. Viz. volatile alcali, ex ⊖ fixo ⊡ extractum. Magnisque virtutibus pollens.

17. Recipe lapidis Calaminaris, ⊕, ⊕ ana, ♏ ex iis △ fortissimo destilla, de phlegma, solutionem ☽ cum eo ⌓ta. calx fundum petit nigra, quæ in capella examinata ☽ fixam sistit.

18. Re-

Phot. Lüdy

Fig. 28. Textprobe aus G. G. Becher's „Opuscula chymica . . ."

Eine andere Art der Zusammenstellung alchemistischer Zeichen finden wir in dem Destillier-Buch von Burghart[17]). Auf drei Tafeln zusammengezogen, von denen wir eine abbilden (Fig. 30) gibt der Autor die aller-

[15]) Joh. Joach. Becheri . . . . . Opuscula chymica rariora . . . . Norimbergae et Altorfii, apud Haeredes Joh. Dan. Tauberi Anno MDCCXIX (Becher lebte 1635–1682) Schweizerische Sammlung für historisches Apothekenwesen an der pharm. Anstalt der Universität Basel. (Vorsteher: P. D. Dr. Häfliger).

[16]) Chymischer Glückshafen oder Große chymische Concordantz von G. G. Becher, in Verlegung J. G. Schiele, Frankfurt MDCLXXXII. Schweizer. Sammlung für histor. Apothekenwesen an der pharm. Anstalt der Universität Basel (Vorsteher: P. D. Dr. Häfliger).

[17]) Zum allgemeinen Gebrauch wohleingerichtete Destillier-Kunst von D. G. H. Burghart, med. Pract. zu Breslau. Bey J. J. Korn 1736, Breslau.

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wichtigsten Zeichen an, versehen mit einer Nummer, die auf ein beigedrucktes Register verweist. Die Zeichen werden auf diese Weise rascher gefunden, die Bedeutungen müssen umständlich nachgeschlagen werden.

In neuerer Zeit (1899) hat es Gessmann unternommen die alchemistischen Zeichen zusammenzustellen.[18]) Die Wiedergabe der Zeichen ist vortrefflich. Gessmann ordnet aber auch die Bedeutungen der Zeichen nach Alphabet und zwar, fatalerweise, die deutschen Bedeutungen. Auf diese Weise wird das Nachschlagen erst recht umständlich, trotzdem Register in verschiedenen Sprachen angefügt sind, und trotz einer orientierenden Zusammenstellung der den Zeichen zugrunde liegenden Formen.

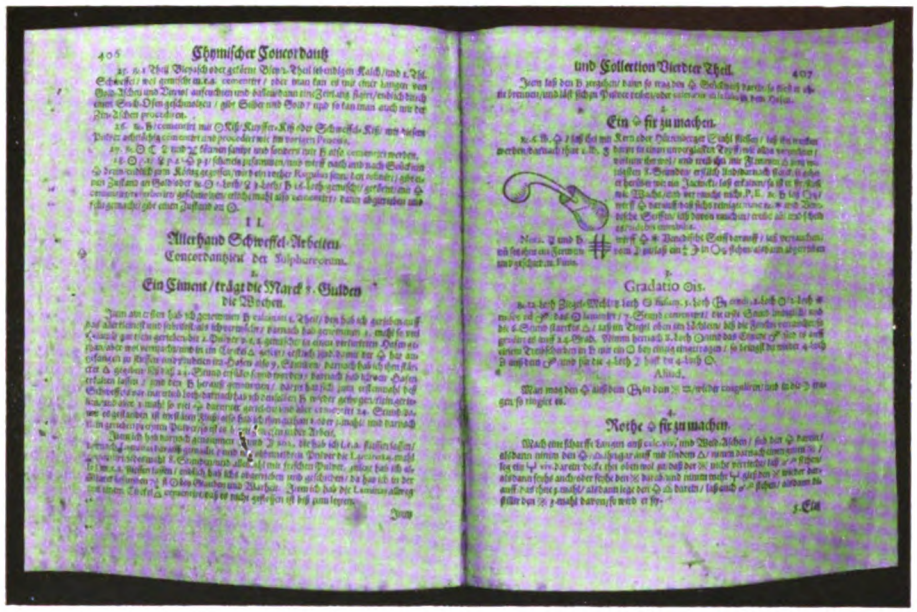

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Fig. 29. Textprobe aus J. J. Becher's „Große chymische Concordantz . . ."

In dem erwähnten Artikel (Anmerkung 14) äußert sich Sudhoff über das Gessmann'sche Buch zum Schluß:

„. . . So legt denn der aufmerksame Leser und Beurteiler das gutgemeinte Buch mit recht gemischten Gefühlen aus der Hand . . . . . der Versuch in vorliegender Gestalt einen handlichen Schlüssel zu der Geheimkammer der alchimistischen Zeichenkunde zu liefern, ist nur sehr teilweise gelungen . . . . . und sehen wir selbst von ernsteren Forschern in der Alchemie ab, auch den tändelnden Liebhabern geheimwissenschaftlicher Absonderlichkeiten, wie dem Neuling, der die Geheimwissenschaft historisch studieren will, wird es neben nützlicher Förderung, Enttäuschung und Überdruß in genügendem Maße bringen, wie redlich das Ganze auch gemeint sein mag".

Das hübsche Buch von Koch[19]) enthält neben einer kleinen Gruppe chemischer Zeichen alle möglichen andern Zeichenarten und hat mehr künstlerischen als historischen Wert.

[18]) Die Geheimsymbole der Chemie und Medizin des Mittelalters von G. W. Gessmann, Graz, Selbstverlag 1899.

[19]) Das Zeichenbuch von R. Koch, Verlag Gerstung in Offenbach a. M. 11 Aufl. 1926.

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Wie wir schon in der Vorrede betonten, ist der Zweck vorliegender Arbeit vor allem der, dem Pharmazie-Historiker, der sich mit dem alchimistischen Schrifttum beschäftigen will, sowie dem Laien, dem der große Reiz des Entzifferns alter Gefäßaufschriften und Rezepte sich offenbart hat, ein möglichst einfach zu benützendes Hilfsmittel, einen Schlüssel darzubieten. Wir haben das Prinzip unserer kleinen Publikation von 1926 als Grundlage verwendet und die uns seither bekannt gewordenen Arbeiten

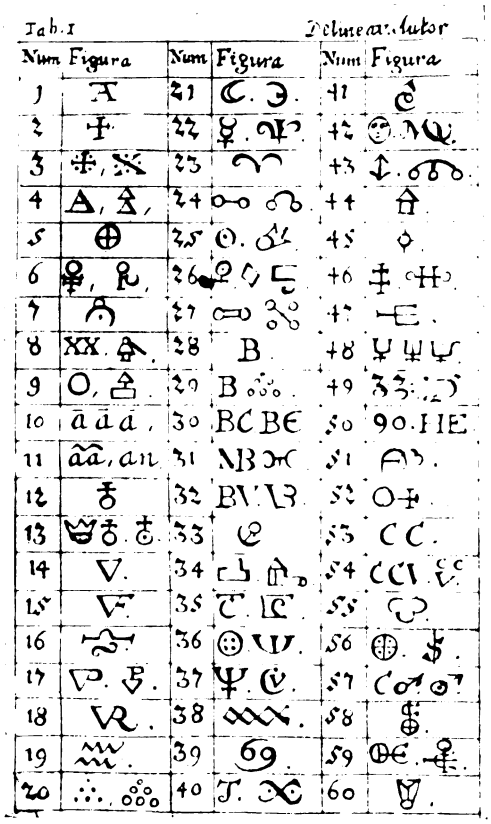


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Fig. 30. Tafel aus Burghard's Destillierkunst.

und Anregungen mitverwertet. Wir sind zu der Überzeugung gekommen, daß weder eine alphabetische, noch eine, nach entwicklungsgeschichtlichen Gesichtspunkten orientierte Anordnung praktisch ist. In den weitaus meisten Fällen wird zu einem gegebenen Zeichen die zugehörige Bedeutung gesucht, das ist in einer alphabetisch geordneten Tafel nur möglich, wenn Seite für Seite genau durchsucht wird. Eine genetische Zusammenstellung dagegen gibt wohl ein interessantes Werk, aber keinen Schlüssel.

Unsere Tafeln sind für jedermann ohne weiteres benutzbar, da sie nur nach Ähnlichkeiten der Zeichen geordnet sind. Zweifellos

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lassen sich so die verschiedenartigsten „Systeme" aufbauen, wir möchten auch unsere Arbeit nicht als das System sondern als ein System aufgefaßt wissen. Wir haben die immer wieder verwendeten Formenelemente gesucht und alle uns bekannten, eigentlichen Alchimistenzeichen in Klassen nach bestimmten Grundformen geteilt. Unsere Tafeln dürfen den Anspruch auf praktische Vollständigkeit erheben, indem Zeichen für Zeichen aus Sommerhoff, Oraculum, Gessmann und einer Anzahl kleinerer Tabellen zu ihrer Aufstellung verarbeitet wurden. Jede Klasse ist so geordnet, daß sie mit den einfachsten Formen beginnt, dann folgen kleine Zusätze und dann, nach steigender Kompliziertheit die Abweichungen. Den Abschluß jeder Klasse bilden demnach meistens Zeichen, die nur noch mit einigem Formensinn als zugehörig betrachtet werden können. Bei der enormen Variationsmöglichkeit auch nur weniger Linien, und bei dem bewunderswerten Formenreichtum mittelalterlicher Schriftkunst ist es nicht verwunderlich, daß oft Symbole geschaffen wurden, die sich nur schwer unter dem Schema einfügen wollen. Zeichen, deren Zugehörigkeit schwer zu entscheiden ist, haben wir rein gefühlsmäßig dorthin gesetzt, wo sie am ehesten gesucht werden dürften. Eine ganze Anzahl Zeichen steht in zwei oder mehr Klassen, nämlich solche, in denen mehrere Grundformen zu erkennen sind, auf diese Weise hoffen wir vergebliches Nachschlagen möglichst zu ersparen. Eine Übersicht der Formenklassen stellen wir den Tafeln voran. Die Bedeutungen der Zeichen sind hinter dieselben gesetzt. Um nun die wichtigen und oft verwendeten Zeichen von dem großen Haufen der selteneren abzuheben, haben wir die Hauptbedeutungen der wichtigsten Zeichen im Druck hervorgehoben. Dadurch hoffen wir möglichste Vollständigkeit zu vereinen mit dem Vorteil der Übersichtlichkeit, den eine kleine Tabelle bieten würde.

Beschäftigt man sich etwas eingehender mit den mittelalterlichen Alchemistenzeichen, so erkennt man je länger je mehr Zusammenhänge, die unter ihnen bestehen. Wie bereits bei der griechischen Tafel immer dieselben Zusätze zum Grundzeichen dieselbe Veränderung am Zustand des Objektes andeuten so benutzte auch das Mittelalter gewisse, sich stets wiederholende typische Strichführungen. So wird z. B. die Eigenschaft des „Schweißtreibens" dadurch ausgedrückt, daß längs der betreffenden Metallzeichen eine punktierte Linie gezogen wird; ein Viereck um das Metallsymbol dagegen deutet Metall-Blatt an; ein Omega mit Bogen nach oben weist auf sublimierten oder leicht flüchtigen, ein Omega mit Bogen nach unten auf präzipitierten Zustand der betreffenden Substanz hin. Ein Pfeil deutet meistens auf einen Zusammenhang mit Eisen u. s. w.

Außerordentlich reizvoll sind die Zeichen, die die Wiedergabe der Form des betreffenden Körpers versuchen, also gewissermassen hieroglyphischen Charakter haben So werden dargestellt: „Alembicus" durch einen mehr oder weniger deutlichen Destillierhelm, „Crucibulus" durch einen dreieckigen Tiegel, wie er heute noch verwendet wird, „Lateres" durch ein aus Ziegelstein errichtetes Mäuerchen, „Hora" durch eine Sand-

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uhr, „Regulus" durch eine Krone, „Phiola" und „Retorta" durch ihre typischen Formen. Die Eiform bedeutet „Ovum", die Mondsichel (nach links oder rechts gedreht) bezeichnet „Luna" und „Argentum", während „Sol" und „Aurum" durch verschiedene Strahlenkränze angedeutet werden. „Filtrare" wird durch einen Trichter gekennzeichnet, „Alumen plumosum" durch eine gefiederte Gerade, „Caput mortuum" durch einen Kreis mit drei Punkten (Augen und Mund) und „Sal petrae (flos parietis)" endlich durch eine Blüte. Eines der ältesten Zeichen dürften die Wellenlinien für „Aqua" sein, da sie genau gleich schon auf manch einem ägyptischen Papyrus anzutreffen sind [20]) und unverändert z. B. in das syrische Blatt (vergl. Fig. 6), und in die mittelalterlichen, alchimistischen und astrologischen Tabellen aufgenommen wurden. Mit einiger Fantasie lassen sich leicht der Beispiele mehr entdecken.

Häufig finden wir für chemisch sich nahestehende (oder wenigstens für sich nahestehend angesehene!) Körper, Zeichen, die von einander abgeleitet sind. Als Beispiel möchten wir nur einerseits an Arsen-, Auripigment-, Arsenicum album-, Acid. arsenici erinnern, andererseits an Cuprum-, Aes ustum-, Aerugo etc. Als „Elemente" sprach, schon im alten Orient, dann aber besonders seit Plato (427 — 347 v. Chr.), man an: Erde Feuer, Wasser und Luft. Aristoteles, der noch den „Aether" als Element betrachtete, glaubte, daß die vier alten Elemente ineinander verwandelbar und mischbar seien; diese Lehre der Transelementation wurde dann später auf die Metalle übertragen, und gab so den Anstoß zu den Versuchen Gold zu machen. Immer zwei Elemente hatten zwei Eigenschaften gemeinsam. Das Feuer galt als warm und trocken, die Luft als warm und feucht, das Wasser aber als kalt und feucht und die Erde endlich als kalt und trocken. Diese Zusammengehörigkeit finden wir in den Zeichen wieder: alle vier leiten sich von demselben Dreieck ab, Feuer und Luft, die nach oben strebenden, leichten Elemente mit nach oben gerichteter Dreieckspitze, Wasser und Erde die schweren, mit Spitze nach unten; Erde und Luft haben außerdem einen wagrechten Querstrich.

Bei der großen Bedeutung, die die Astrologie im Mittelalter besaß und unter dem Eindruck der Lehre, daß jedem irdischen Körper Beziehungen zu einem bestimmten Himmelskörper innewohnen, ist es nicht verwunderlich, daß zahlreiche Zeichen der astralen Zeichenlehre entnommen wurden. So finden wir vor allem die Metalle durch die Zeichen der Planeten, zu denen gehörig sie betrachtet wurden, ausgedrückt. Diese waren: Aurum (sol), Argentum (luna), Stannum (Jupiter), Hydrargyrum (Mercur), Ferrum (Mars), Cuprum (Venus), Plumbum (Saturnus) und Stibium (Terra). Den astralen Zeichen entnommen, wurden in der Alchimie ferner verwendet die 12 Zeichen des Tierkreises, sowie diejenigen für Tag und Nacht.

Besonders letztere sind, trotz größter Einfachheit, außerordentlich fein empfunden, indem sie das aufsteigende Wesen des Tages, das versinkende der Nacht trefflicher nicht charakterisieren könnten. Sehr hübsch drückt

[20]) Vergl. Tschirch, Handbuch der Pharmakognosie 1, 2 pag 466.

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sich im Zeichen für „fluere" das auseinanderstrebende Fließen aus. Schon handgreiflicher sind die großen, aber dekorativen Kugeln für „Oleum", die fadenziehenden Succus-Tropfen und die feinen Arena-Körnchen.

Eine große Anzahl Zeichen besteht nur aus Buchstaben. Diese sind meist die Anfangsbuchstaben der lateinischen Bedeutung, gar oft aber durch Umstellungen oder Zusätze bis zur Unkenntlichkeit verzerrt. Nicht selten sind sie stark reduziert, so stammt oftmals ein kleines Querstrichlein von einem ursprünglichen „t" ab. Als Beispiel, unter vielen, für zusammengesetzte Zeichen sei endlich dasjenige für „Terra foliata tartari" erwähnt. Wir haben daselbe als Umschlagsillustration für vorliegende Arbeit gewählt. Leicht erkennen wir darin das Zeichen für „Terra" wieder sowie dasjenige für „Tartarus". Das „F" ist ein Überrest von dem in früheren Zeichen ausgeschriebenen „fol".

Häufig läßt sich aber hinter den Zeichen kein tieferer Sinn entdecken, so daß sie bloßen Zufallswert haben und nur als nützliche Abkürzung aufgefaßt werden können. Viele von ihnen mögen der Phantasie des betreffenden Schreibers entstammt sein, viele werden auch durch undeutliches Schreiben nach und nach in völlig veränderte Form geraten sein.

Dafür, daß die Formen der Zeichen vom Wandel der Zeit nicht immer unberührt blieben legt das Symbol ⏲ ein interessantes Zeugnis ab. Dies Zeichen wird recht häufig in Museen auf alten Gefäßen angetroffen, steht aber in keinem einzigen der von uns verwendeten Verzeichnisse. Es bedeutet „Vitriolum". Wohl ist seine Ähnlichkeit mit dem traditionellen Vitriol-Zeichen groß, man wäre aber durchaus nicht berechtigt, nur aus dieser Ähnlichkeit auf seine Bedeutung zu schließen, da oft unscheinbare Zusätze oder Weglassungen in Zeichen grundlegende Unterschiede der damit bezeichneten Objekte andeuten. In diesem Falle darf der Schluß auf Vitriol gemacht werden, weil alle mit diesem „abnormalen" Symbol bemalten Gefäße eine auf Vitriol stimmende Aufschrift tragen.

So finden wir auf Fig. 12: Tartarus vitriolatus
Fig. 18: Pulvis Tartari vitriolati praeparatus
(= Tartarus vitriolatus)
Fig. 20: Spiritus Vitrioli (auf beiden Gefäßen rechts)
Fig. 21: Oleum Vitrioli.

Den sichersten Beweis liefert nun aber die Aufschrift der großen Flasche in der Mitte von Fig. 21, die „Elixir Vitrioli Mynsichti" enthielt.

Alle hier angeführten Artikel sind in der berühmten Pharmacopoea Wirtenbergica, die 1786 in Stuttgart erschien, enthalten. Da die betreffenden Gefäße jüngeren Datums scheinen, diejenigen auf Fig. 20 sogar deutliche Empire-Motive und Anfänge von Biedermeierschmuck aufweisen, ist anzunehmen, daß das Vitriol-Zeichen erst später so geschrieben wurde und zu Zeiten Sommerhoff's und des Autors des Oraculi noch nicht üblich war.

Wir haben deshalb dieses Zeichen nicht in die ordentliche Reihe unserer Tafeln gesetzt, sondern es als Variante dem historischen Vitriolzeichen beigefügt.

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Vom künstlerischen Standpunkte aus betrachtet erscheinen die Zeichen von einem wunderbaren Ebenmaß. Viele haben symmetrischen Aufbau, aber erst recht bei den unsymmetrischen fällt das fein abgewogene Gleichgewicht der Konstruktion auf. Ein Zeichen wie das andere ist ein kleines Meisterwerk dekorativer Raumausfüllung.

Wir stehen hier vor derselben Erscheinung, wie in der übrigen mittelalterlichen Buchschmuck- und Buchdruckkunst: der Handwerker von einst hatte einen, möglicherweise unbewußten, Schönheitssinn, der mit zunehmender Mechanisierung der Berufe vollständig verloren ging, und trotz der modernen Bestrebungen noch nicht völlig wieder erlangt worden ist.

Diese paar Andeutungen mögen genügen, um den Reichtum, der hinter diesen so harmlosen Zeichen steckt, zu beleuchten.

Wenn unsere Schrift dem Pharmaziehistoriker die Arbeit etwas erleichtert und dazu beiträgt, die unserer Fachgeschichte noch fernstehenden Kollegen und weitere Kreise dafür zu interessieren, dann ist ihr Zweck erreicht, denn das Studium der alchimistischen Zeichen ist ein ganz kleiner Schritt ins weite, geheimnisvoll verstaubte Reich apothekerlicher und chemischer Vergangenheit. Wie alle historische Forschung ist unsere Fachhistoria in besonders hohem Maße mit einem ganz eigentümlichen Zauber umgeben, der selbst in unsere heutige, nüchterne Berufsarbeit noch einen wärmenden Strahl abzugeben vermag; man erlebt ein zweites Mal, was versunkene Geschlechter bewegt hat, man versteht heute Gültiges besser durch die Kenntnis seines Werdens und man findet einen gewissen Trost darin, daß vor den letzten, großen Fragen auch die Vorwelt gleich arm dastand, wie wir noch heute.

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# Alphabetisches Register

## der in den nachfolgenden Tafeln vorkommenden lateinischen Ausdrücke und Erläuterungen zu denselben.

| | |
|---|---|
| Abstrahere | Abziehen, abdestillieren. |
| Acetabulum | Ein Maß, soviel, als eine Eierschale faßt. |
| Acetum | Essig. |
| Acetum cydoniorum | Quittenessig |
| Acet. dest. | Destillierter Essig. |
| Acet. ter dest. | Dreimal dest. Essig. |
| Acetum vini rubri | Essig aus rotem Wein. |
| Acidum | Säure |
| Acid. arsenici | Arsensäure (um 1775 von Scheele gebraucht). |
| Acid. formicarum | Ameisensäure. |
| Acid. nitricum | Salpetersäure. |
| Acid. salis | Salzsäure. |
| Acid. tartari | Weinsäure. |
| Acid. vitrioli | Schwefelsäure. |
| Ad pondus omnium | Auf das Gewicht des Ganzen. |
| Adde! | Füge hinzu! |
| Aer | Luft. |
| Aerugo | Kupferblüte, Grünspan. |
| Aes | Kupfer, Erz. |
| Aes destillatum | Kupferblüte, Grünspan. |
| Aes ustum | Gebranntes Kupfer, Kupfersafran. |
| Aes viride | Grünspan |
| Aestas | Sommer. |
| Ahenum | Kessel aus Kupfer oder Eisen. |
| Albumen | Eiweiß. |
| Alcali | Aschensalz, Potasche. |
| Alcohol vini | Weingeist. |
| Alembicus | Destillierhelm (Ein Apparat aus Glas oder Metall, vor der Erfindung des Liebigkühlers ausschließlich gebrauchter Kühler; kugelig-glockenförmig mit seitwärts absteigendem, schnabelartigem Abflußrohr). |
| Alumen | Alaun. |
| Alumen calcinatum | Gebrannter Alaun. |
| Alumen catinum | Potasche. |
| Alumen faecum | Trusenasche. |
| Alumen ustum | Gebrannter Alaun. |
| Alumen plumeum<br>Alumen plumosum | Federweiß, Asbest. |
| Alumen saccharinum | Zucker-Alaun (in der Pharmazie verwendet, hergestellt aus Eiweiß, Rosenwasser und rohem Alaun. Er wurde in Form von kleinen Zuckerhüten getrocknet). |
| Amalgama | Amalgam. |
| Ammoniacum, vide Sal ammoniacum | |
| Amphora | Maß für Flüssigkeiten „bei den Alten“ (so nach Sommerhoff: . . Italis continet libras septuaginta duas . . ). |
| Ana | Gleichviel von jedem. |
| Animalia | Tiere, Drogen aus dem Tierreich. |
| Annus | Jahr (bei den Philosophen ein gewöhnlicher Monat) |
| Antihecticum Poterii | ein Präparat gegen Schwindsucht; ausführliches Rezept. bei Sommerhoff! |
| Antimonii flores | Spießglas-Blüte. |
| Antimonii hepar | Spießglas-Leber. |
| Antimonii regulus | Spießglas-König. |
| Antimonii vitrum | Spießglas-Glanz. |

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| | |
|---|---|
| Antimonium | Spießglas. Bis zum 15. Jahrhundert verstand man unter Antimonium oder Stibium nie das metallische Antimon, sondern immer die natürlich vorkommende, schwarze Schwefelverbindung (nach Peters). Antimon war nach alchemistischer Ansicht ein „coagulierter Mercurius", eine sehr edle Substanz. Die daraus hergestellte „Quinta essentia Antimonii" war ein Universalmittel, das alle übrige Medizin überflüssig machte. Antimon war das Symbol des Irdischen, der Grundmaterie. |
| Antimonium spagyriæ præparatum | Auf alchemistischem Weg erhaltenes Spießglas (spagyricus = alchemistisch). |
| Aqua | Wasser. |
| Aqua amphora | Ein Krug Wasser (vide Amphora). |
| Aqua ardens | Spiritus Vini. |
| Aqua calcaria | Kalklauge, Kalkwasser. |
| Aqua communis | Gewöhnliches Wasser. |
| Aqua fortis | Scheidewasser, durch Destillation eines Gemisches von Salpeter und von Vitriolum vulgaris (Gemisch von Eisen- und Kupfersulfat) in vorgelegtes Wasser erhalten. |
| Aqua gradaria | Gradierwasser. |
| Aqua insipida | Nicht trinkbares Wasser. |
| Aqua Mercurii = Aqua foetida | Stinkendes Wasser. |
| Aqua mercurialis | Ein pharm. Präparat zu äußerlichem Gebrauch, hergestellt aus Cerussa, Alumen, Lithargyrum, Mercurius sublimatus und Salmiaksalz mit verschiedenen dest. Wässern und Essig. (Pharm. Wirtenbergica von 1786). |
| Aqua nitrii<br>Aqua salis nitri | Salpeterwasser. |
| Aqua pluvialis | Regenwasser. |
| Aqua regis | Königswasser, durch Mischen von einem Teil Salmiaksalz und sechs Teilen Scheidewasser erhalten. |
| Aqua vitæ | Lebenswasser. Aquavit. |
| Aquarius | Wassermann (astrologisch). |
| Arcitenens | Schütze (astrologisch). |
| Arena | Sand. |
| Argentum | Silber. |
| Argentum foliatum | Blattsilber. |
| Argentum musicum | Saiten-Silber. |
| Argentum pictorium | Maler-Silber. |
| Argentum vivum | Quecksilber. |
| Argilla | Weißer Ton (Bolus alba). |
| Argumentatio, Argumentum | Beweis, Begründung. |
| Aries | Widder (astrologisch). |
| Armena bolus | Armenischer Bolus. |
| Armoniacum = Ammoniacum | |
| Arsenum, arsenicum | Arsenic-Metall wird erst seit Paracelsus (16. Jahrhundert) erwähnt, im Mittelalter verstand man unter arsenicum immer das gelbe Schwefelarsen (nach Peters). |
| Arsenicum album | Weißer Arsenik, Mausgift ($As_2 O_3$). |
| Arsenicum citrinum<br>Arsenicum flavum, luteum | Rauschgelb, Operment, Auripigment, $As_2 S_3$. |
| Arsenicum rubrum | Realgar, Arsenrubin ($As_2 S_2$). |
| Arsenicum sulfuricum | Arsenschwefel, gelbes Schwefelarsen, $As_2 S_3$. |
| Arsenicum sublimatum | Sublimierter Arsenik, $As_2 O_3$. |
| Assare | Trocknen. |
| Athenaeum | Eisenkessel |
| Atramentum | Tinte, Vitriol. |
| Atramentum album | Kupferwasser, weißer Vitriol. Heute versteht man unter Vitriolum album nur noch Zinksulfat. Die Metalle wurden früher meist nur in sehr unreinem Zustand verarbeitet). |
| Auri calx | Zu Pulver geglühtes Gold. |
| Aurichalcum | Messing. |
| Auripigmentum (= Arsenium citrinum) | Operment, gelbes Schwefelarsen ($As_2 S_3$). |
| Aurum | Gold. |
| Aurum foliatum | Blattgold. |

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| | |
|---|---|
| Aurum musicum | Saitengold. |
| Aurum pictorium | Malergold. |
| Aurum potabile | Trinkbares Gold. |
| Autumnus | Herbst. |
| Balneum | Bad. |
| Balneum arenæ | Sandbad. |
| Balneum cineris | Aschenbad. |
| Balneum mariæ (maris) | Wasserbad. |
| Balneum vaporis (roris) | Dampfbad. |
| Bezoar occidentalis | Westindischer Bezoar. |
| Bezoar orientalis | Ostindischer Bezoar (Bezoarstein spielte eine sehr große Rolle in der Mittelaltermedizin. Er galt als giftwidrig. Es handelte sich um nußgroße bis eigroße kugelige Ausscheidungen in den Gedärmen verschiedener syrischer und persischer Ziegenarten). |
| Bezoardicus, a, um | als Gegengift dienend. |
| Bezoardicum Joviale | Schweißtreibendes Zinn. |
| Bezoardicum lunare | Schweißtreibendes Silber. |
| Bezoardicum martiale | Schweißtreibendes Eisen (Die Eigenschaft des Schweißtreibens ist immer durch eine Reihe Pünktchen um das betreffende Symbol dargestellt). |
| Bezoardicum minerale | Schweißtreibender Spießglas-König. |
| Bezoardicum Saturninum | Schweißtreibendes Blei. |
| Bezoardicum solare | Schweißtreibendes Gold. |
| Bezoardicum venereum | Schweißtreibendes Kupfer. |
| Bismutum | Wismut. |
| Bolus alba | Weißer Bolus. |
| Bolus Armena | Armenischer Bolus |
| Bolus communis | Gewöhnlicher Bolus. |
| Borax | Borax. |
| Cadmia = Tutia | |
| Cæmentare (cementare) | Verschiedene Substanzen wurden schichtweise übereinander gelegt und so der Einwirkung von Feuer, Sonne oder Luft überlassen. Bedeutet ferner: Kitten, schichten, mauern. |
| Calamus | Rohr, auch die Pflanze Acorus Calamus. |
| Calcinare | Ausglühen, rösten. |
| Calcinatio Argenti | Das Ausglühen des Silbers zu Pulver. |
| Calcinatio Auri | Das Ausglühen des Goldes zu Pulver. |
| Calidus | Warm. |
| Calx | Kalk (Metallkalk = Metallkalch = Metall-Oxyd). |
| Calx ovorum | Kalk aus Eierschalen. |
| Calx ovorum putaminum | Putamen = Steinschale, Kernschale, steinhartes Gehäuse. (Das „ovorum" scheint hier überflüssig!). |
| Calx Solis | Gold-Kalch, zu Pulver geglühtes Gold. |
| Calx Saturni | Blei-Kalch, geglühtes Blei, Bleigelb. |
| Calx viva | Ungelöschter Kalk. |
| Camphora | Kampher. |
| Cancer | Krebs (astrologisch). |
| Capella | Sandcapelle. Es waren dies kleine, aus Holzasche oder Knochenerde hergestellte, flache Gefäße, in denen durch Glühen auf einem Herd mit Blasbalg die unedlen Metalle aus den Gold- und Silberlegierungen heraus geschlackt wurden). |
| Capitellum | Helm, Teil des Destillierapparates. |
| Capricornus | Steinbock (astrologisch). |
| Caput mortuum | Totenkopf (man bezeichnete damit den Rückstand bei chem. Arbeiten, z. B. die zurückbleibende Masse in der Destillerblase). |
| Carbo, carboneum | Kohle, Kohlenstoff. |
| Catinus | Tiegel. |
| Cera | Wachs. |
| Cera citrina | Gelbes Wachs. |
| Cera virginea | Jungfernwachs, Wachs aus jungen Bienenstöcken schmutzig-weiß bis gelb. |
| Cerussa | Bleiweiß. |
| Chalybs (griechischer Stamm) | Stahl, gehärtetes Eisen. |



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| | |
|---|---|
| Cinis | Asche. |
| Cineres clavellati | Potasche. |
| Cineres faecum vini | Asche der Weintrusen. |
| Cinere lixivio elicere | Auslaugen. |
| Cineres cribrati | Gesiebte Asche. |
| Cineres Plumbi | Bleiasche. |
| Cinnabaris | Zinnober. |
| Cinnabaris antimonii | Spießglas-Zinnober. (Zubereitungsvorschrift bei Sommerhoff!). |
| Cinnabaris solidum | Echter Zinnober. |
| Coagulatio | Gerinnen |
| Cobaltum | Kobalt. |
| Colatura | Das Durchgeseihte. |
| Colcothar (= caput mortuum vitrioli) | Vitriolrot (Pulveriger Rückstand der Destillation der Schwefelsäure aus Eisenvitriol). |
| Completus | Vollständig. |
| Compositio | Zusammensetzung (verschiedener Arznelen), Vermischung |
| Cornutum | Retorte. |
| Coquere | Kochen. |
| Coculus albus | Getrocknete |
| Coculus rubeus | Frische } Früchte von Cocculus indicus (?) |
| Coelum colore inflammatum | Geröteter Himmel (war für verschiedene alchimistische Manipulationen notwendig) |
| Conchae | Austernschalen, präpariert, geschlämmt. |
| Contervet | ? (Nicht auffindbar, wahrscheinlich ein Druckfehler). |
| Cornu cervi | Hirschhorn (wurde an Stelle der heutigen, reineren, Gelatine verwendet). |
| Cornu cervi ustum | Gebranntes Hirschhorn. |
| Creta | Kreide. |
| Crocus | Safran. |
| Crocus aromaticus | Safran. |
| Crocus auri | Goldsafran, Goldoxyd, so: $Au(OH)_3$. |
| Crocus martis | Eisensafran, rotes Eisenoxyd, so: $Fe_2O_3$. |
| Crocus metallorum | Spießglas-Safran (durch Verpuffung eines Gemisches von „Antimonium crudum", gemeint war damit das schwarze Schwefelantimon, mit Salpeter. |
| Crocus veneris | Kupfer-Safran (durch Ausglühen von Kupfervitriol mit darauffolgender Behandlung mit Wasser u. Versüßung). |
| Crucibulus | Schmelztiegel. |
| Cristallus | Kristall. |
| Cucurbita | Glaskolben. |
| Cucurbita coeca | Geschlossener (blinder) Kolben. |
| Cuprum | Kupfer. |
| Cuprum caldarium | „Glockenspeis". |
| Cum vino | Mit Wein. |
| **D**a et signa! | Gib es und überschreibe! |
| Decoctum | Abkochung. |
| Destillare | Destillieren. |
| Destillare per cineres | Aus dem Aschenbad destillieren. |
| Destillare per arenam | Aus dem Sandbad destillieren. |
| Diaphoreticum=Bezoardicum | |
| Dies | Tag. |
| Dies et nox | Tag und Nacht. |
| Digerere | Digerieren. |
| Digestio | Einen Körper mehr oder weniger lange bei 50°–60° warm halten, Verdauen. |
| Drachma | Drachme, Quentlein. |
| Drachma semis | Eine halbe Drachme. |
| **E**bullitio | Sieden, kochen. |
| Elementum, Elementa | Bei den Alchimisten: die vier Elemente Luft, Feuer, Erde und Wasser, die in einander überführbar sein sollten. Die Geheimlehre fügte dann noch den „Weltgeist" (Mercurius) als Element dazu. Mercurius galt als geistige Quintessenz aller Körper. |
| Essentia | Essenz. |
| Evacuatio | Luftleer machen |

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| | |
|---|---|
| Extractio sicca | Sublimieren. |
| Extrahere | Ausziehen. |
| **F**aex vini | Weinhefe. |
| Farina | Mehl, feines Pulver. |
| Farina laterum | Ziegelsteinpulver. |
| Fel vitri | Glasgalle (Schaum des geschmolzenen Glases, weißliche Salzmasse, bestand hauptsächlich aus KCl, $K_2CO_3$ u. $K_2SO_4$). |
| Ferrum | Eisen. |
| Ferrugo | Eisenrost. |
| Figere | Einen flüchtigen Körper wärmebeständig machen. |
| Filtrare | Filtrieren. |
| Filtrum | Filter. |
| Fimus equinus | Pferdemist. |
| Fixare | Feuerbeständig machen. |
| Fixum | Feuerfest. |
| Flores | Blüten. |
| Flores antimonii | Antimonblüte ($Sb_2O_3$) |
| Flores Benzœs | Sublimierte Benzœsäure. |
| Flores martis = Crocus martis | |
| Flores sulfuris | Sublimierter Schwefel. |
| Flores vitrioli | Vitriolblumen. |
| Flores virides aeris | Grünspanblumen. |
| Fluere | Fließen. |
| Fornax | Ofen. |
| Fricare | Reiben, abreiben. |
| Frigidum | Kalt, frostig, kühl. |
| Fuligo | Ruß. |
| Fumus | Rauch. |
| Fusio | Schmelzen. |
| **G**radatio | Gradieren. |
| Gradus ignis | Die Feuerstärke. |
| Granatus | Granatstein. |
| Granum | Gran, der 60ste Teil einer Drachme. |
| Gummi | Gummi |
| Gummi arabicum | Arabisches Gummi. |
| Gutta | Tropfen. |
| **H**aematites | Blut(eisen)stein. |
| Herba | Kraut. |
| Hermetice sigillatum | Hermetisch sigilliert, zugeschmolzen. |
| Hiems | Winter. |
| Holca = Drachma | |
| Hora | Stunde. |
| Humiditas | Feuchtigkeit. |
| Hydrargyrum | Quecksilber [siehe auch Mercurius und Argentum vivum]. |
| **I**chthys | Fisch [astrologisch: Fische]. |
| Ignis | Feuer. |
| Ignis circulatorius | Circulierfeuer. |
| Ignis fortis | Starkes Feuer. |
| Ignis lentus | Gelindes Feuer. |
| Ignis reverberius | Reverberierfeuer [der Reverberierofen war so gebaut, daß die zu erhitzende Substanz von unten und oben von Flammen bestrichen wurde]. |
| Ignis rotae | Radfeuer, das Feuer umspülte in besonders konstruierten Ofen den zu behandelnden Körper von allen Seiten. |
| Imbibere | Tränken. |
| Incompletus | Unvollständig. |
| **J**upiter | Jupiter [Zinn]. |
| **L**amina | Blech. |
| Lana illota | Ungereinigte Wolle. |
| Lapis | Stein. |
| Lapis Armenius | Armenienstein. |
| Lapis bezoar occidentalis = Bezoar occidentalis | |

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|---|---|
| Lapis bezoar orientalis = Bezoar orientalis | |
| Lapis calaminaris | Galmeistein. |
| Lapis calaminaris subl. | Sublimierter Galmeistein. |
| Lapis calcarius | Kalkstein. |
| Lapis crystallinus | Kristallstein. |
| Lapis hæmatites | Blutstein, ein natürliches Eisenoxyd. |
| Lapis Lazuli | Lasurstein. |
| Lapis Magnes | Magneteisenstein. |
| Lapis nauticus | Magnetstein, Segelstein. |
| Lapis Prunellæ | Kalium nitricum tabulatum [Salpeterküchelchen]. |
| Lapis sabulosus | Beinbruch. |
| Lapis silex | Kieselstein. |
| Later | Ziegelstein. |
| Later cribrati | Gesiebtes Ziegelsteinmehl. |
| Lege artis | Nach den Regeln der Kunst |
| Leo | Löwe [astrologisch] |
| Levor Auri | Goldglätte, langsam abgekühltes, rötliches, Bleioxyd. [PCO]. |
| Levor Argenti | Silberglätte, rasch abgekühltes, gelbes Bleioxyd. [PCO]. |
| Libra | Pfund. |
| Libra civilis | Gewöhnliches Pfund [ 32 Loth]. |
| Libra medicinalis | Apotheker-Pfund [ 24 Loth]. |
| Libra pensilis | Wage. |
| Lignum | Holz. |
| Limatum | Feilspäne. |
| Limatura chalybis | Eisenfeilspäne. |
| Limatura martis | Eisenfeilspäne. |
| Limus | Schlamm. Kot, Grundmasse alles Irdischen. |
| Lithargyrum argenteum | Bleischlacke aus den Silberöfen. [Peters]. |
| Lithargyrum aureum | Bleischlacke aus den Goldöfen. [Peters]. |
| Lithargyrum plumbi | „. . . est excrementum e purificatione Argenti, quae per Plumbum fit . . . .“ [Sommerhoff]. |
| Lixivium | Lauge. |
| Lixivium tartari | Lauge aus Potasche. |
| Luna | Mond. |
| Luna crescens | Zunehmender Mond. |
| Luna deficiens | Abnehmender Mond. |
| Lutatio | Das Verkleben [von Gefäßen] |
| Luteum ovi | Eigelb. |
| Lutum | Leim, Kitt [zum Verkitten von Glasapparaten]. |
| Lutum philosophorum | Philosophischer Leim. |
| Lutum sapientiae | Mischung aus Lehm, Roßdünger, Ziegelmehl, Eisenpulver, Salzwasser und Eiweiß. Kitt zur Dichtung von hoch zu erhitzenden Apparaten. [Peters]. |
| Liquefacere | Flüssigmachen. |
| Lux sextilis | Sextilschein. |
| Magnes | Magneteisenstein. |
| Magnesia | Bittererde, Magnesiumoxyd. |
| Manipulus | Eine Handvoll. |
| Marcasita | Wismut. |
| Marcasita argentea | Bismutum. |
| Marcasita aurea | Zink. |
| Marcasita fixa | ? |
| Marcasita metallica | Zink. |
| Materia prima | Grundmaterie. |
| Mars | Mars [Eisen]. |
| Massa pilularum | Pillenmasse. |
| Mel | Honig. |
| Mensis | Monat. |
| Menstruum | Lösungsmittel, Ausziehmittel. |
| Mercurius præcipitatus | Weißes Quecksilberpräcipitat. |
| Mercurius Saturni præcipitatus | Mennige. |
| Mercurius sublimatus | Sublimat. |
| Mercurius vitæ | Brechpulver [durch Mischen von Butyrum Antimonii [$SbCl_3$] mit Brunnenwasser erhaltener Niederschlag von Antimonoxychlorid [Algarothpulver], wurde selten gebraucht. |

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| Mercurius vivus | Quecksilber. |
| Metalla septem | Sieben Metalle. |
| Minium | Menninge. |
| Miscere | Mischen. |
| Mixtura simplex Ludovici | Dr. Ludwig's simple Tropfen. |
| Mortificare | Töten. |
| Nitrum | Salpeter [das Nitrum der alten Römer war jedenfalls ein unreines, kohlensaures Natron. Unsern heutigen Salpeter erwähnt zuerst Geber, der ihn Salpetræ nennt]. |
| Nitrum Graecorum | Mauersalpeter. |
| Nitrum stolidum | Mauersalpeter. |
| Nitrum tartari | Salpetersalz, Kaliumnitrat |
| Nix | Schnee. |
| Nox | Nacht. |
| Nux moschata | Muscatnuß. |
| Obulus | ½ Scrupel. |
| Ochra | Ocker, Berggelb. |
| Ochra plumbea | Cerussa citrina, Bleigelb, nach Sommerhoff von den Malern viel gebraucht: quae ex Plumbo adusto fit, aceto extincto, . . . . |
| Oleum | Oel. |
| Oleum Argenti | Silberöl. |
| Oleum coctum | Gekochtes Oel. |
| Oleum commune | Baumöl. |
| Oleum destillatum | Destilliertes Oel. |
| Oleum empyreumaticum | Brandöl [ölige Flüssigkeiten durch Schmelzung oder trockene Destillation erhalten]. |
| Oleum essentiale | Aetherisches Oel. |
| Oleum expressum | Ausgepreßtes Oel [ex olivis immaturis expressum]. |
| Oleum olivarum | Olivenöl. |
| Oleum salis petrae | Salpeteröl. |
| Oleum Saturni | Bleiöl. |
| Oleum sulfuris | Schwefelöl. |
| Oleum Talchi | Talköl. Vorschrift bei Sommerhoff. |
| Oleum tartari Sennerti | Dr. Sennert's Weinstein-Oel. |
| Oleum Vitrioli | Vitriolöl [$H_2SO_4$ conc]. |
| Operatorium | Laboratorium |
| Operment | Arsenicum citrinum |
| Oppositio | Opposition, Gegenüberstellung [astrologisch]. |
| Ovum | Ei. |
| Pars | Ein Teil. |
| Pars cum parte | Gleichviel Teile Gold und Silber miteinander „caementiert" und „graduiert". |
| Per deliquium | Von selbst zerflossen. |
| Permiscere | Mischen. |
| Permixtio | Mischung. |
| Philosophi | Die Philosophen. |
| Philosophus | Der Philosoph. |
| Philtrare = filtrare | |
| Phiola | Glaskolben. |
| Phlegma | [das Entkräftete], der Rückstandschleim in der Destillierblase, ein schleimiger Bodensatz. |
| Phlegma (salis) | Wässeriger Rückstand, der durch Destillation aus dem „Spiritus" zu entfernen gesucht wurde. |
| Phlogiston | Phlogiston. Brennstoff. Die Verbrennung wurde als Verlust von solchem Brennstoff gedeutet. |
| Phosphorus | Phosphor. |
| Piger Henricus | Fauler Heinz, Athanor; Ofen, der während des Brennens mit neuem Brennmaterial beschickt werden konnte. |
| Pilulæ salis petræ | Salpeterkügelchen. |
| Pisces | Fische [astrologisch]. |
| Platina | Platin. |
| Plumbago | Bleiweiß. |
| Plumbum | Blei |
| Plumbum philosophorum | Philosophisches Blei. |

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|---|---|
| Plumbum ustum | Gebranntes Blei, gemeint ist nicht Bleioxyd, sondern Bleisulfid [Peters]. |
| Pondus civile | Pfund. |
| Præcipitare | Niederschlagen, fällen. |
| Præparare | Zubereiten. |
| Præparatum | Das Dargestellte. |
| Principia corporum | Grundsubstanzen. |
| Pugillus | Prise, was man mit 3 Fingern fassen kann [ $^1/_2$ Drachme]. |
| Pugillus semis | $^1/_2$ Prise. |
| Pulverisare | Pulvern. |
| Pulvis | Pulver. |
| Purificatio | Reinigung. |
| Putrefactio | Faulen, Fäulnis. |
| Quantum placet | Soviel als beliebt |
| Quantum satis | So viel als nötig ist. |
| Quantum vis | So viel als man will. |
| Quinta essentia | Quintessenz. Hauptkraft. Das Feinste und Beste. [Durch die Bestrebungen des Paracelsus, die medizinisch wirksamen Stoffe aus den natürlichen Arzneistoffen zu verdichten und zu konzentieren kam man zum Begriff der Quintessenz oder Tinktur]. |
| Radix | Wurzel. |
| Rasura, raspatum | Geraspeltes. |
| Realgar | Rotes Schwefelarsen [$As_2 S_2$]. |
| Receptorium | Rezeptbuch. |
| Receptaculum | Rezipient, Auffanggefäß. |
| Receptum | Vorschrift, Verordnung. |
| Recipe! | Nimm! [Wird zu Beginn eines Rezeptes gesetzt]. |
| Recipiens | Vorlage, Auffanggefäß. |
| Reductio | Reduktion. |
| Regulus | Metallkönig. [Ein aus einer Verbindung reduziertes Metall]. |
| Regulus antimonii medicinalis | Der Arznei-Spießglas-König, durch Schmelzen von Cinis Antimonii mit schwarzem Schwefelantimon erhalten. |
| Regulus martiatus | Eisenkönig. |
| Regulus stellatus | Gegossenes Antimon, das mit sternförmiger Struktur erstarrt. |
| Renovatio metallorum | Erneuerung von Metallen, Wiedergewinnung. |
| Resigallum | Arsenicum citrinum. |
| Resina | Harz. |
| Retorta | Retorte [Elephanten-Schnabel] |
| Reverberatio | Das Glühen im Ofen, wobei die Flamme das Objekt von allen Seiten umschlägt. |
| Reverberium | Reverbierofen, eigens konstruierte Ofen, in denen das Schmelzgut von allen Seiten vom Feuer umlodert wurde. |
| Rhabarbarum | Rhabarber. |
| Roseus color | Rosenfarbig. |
| Saccharum | Zucker |
| Saccharum Plumbi | Bleizucker. |
| Saccharum Saturni | Bleizucker. |
| Sagittarius | Schütze [Sagitta Pfeil] astrologisch. |
| Sal | Salz. |
| Sal acidum | Saures Salz. |
| Sal alcali | Aschen-Salz [Alkalikarbonat] |
| Sal ammoniacum<br>Sal communis<br>Sal gemmæ | Salmiak<br>Kochsalz<br>Steinsalz<br>} Im Altertum und im Mittelalter unterschied man zwischen natürlich vorkommendem Salz „Sal fossile“ oder „Sal gemmæ“ und dem aus salzhaltigem Wasser gewonnenen. Die Alten kannten den Salmiak überhaupt nicht. Ihr „Sal ammoniacum“ war ein Steinsalz, das beim Tempel des Jupiter Ammon in Lybien im Sande gegraben wurde. Bis zum Ende des 18. Jahrhunderts verstand man unter Sal ammoniacum [ armoniacum] neben Chlorammonium auch Steinsalz und alle Ammoniumsalze. [Nach Peters]. |
| Sal armoniacum | Sal ammoniacum. |
| Sal capitis mortui | Salziges caput mortuum, Rückstand in der Destillierblase. |

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| Sal colcotharium | Vitriolsalz. |
| Sal essentiale vini | Weinsteinsalz. |
| Sal fossile | Steinsalz ( Sal gemmae). |
| Sal marinum | Meersalz. |
| Sal petræ | Mauersalpeter, Kellersalpeter. |
| Sal sedativum | Sedativsalz, wurde aus einer Lösung von Borax in Wasser durch Zusatz von conc. $H_2SO_4$ [Vitriolöl], abgeschieden. Es bestand also aus Borsäure. |
| Sal tartari essentiale | Weinsteinsalz. |
| Sal tartari fixum | Weinsteinsalz. Weinstein wurde geglüht, und was zurückblieb aus Wasser umkristallisiert. Es handelte sich demnach um Kaliumkarbonat. |
| Sal urinæ | Harnsalz. |
| Sal vitri | Glasgalle. |
| Sal vitrioli alcalinum | Potaschenvitriolsalz [$K_2SO_4$ und Verunreinigungen]. |
| Sal volatile | Ein flüchtiges Salz. |
| Sapo | Seife. |
| Saturnus | Saturn [Blei]. |
| Scorpius | Skorpion [astrologisch]. |
| Scrupulus | Skrupel [ 20 Gran]. |
| Scrupulus semis | ½ Skrupel. |
| Secundum artem | Kunstgerecht. |
| Semen | Samen. |
| Semis | Halb. |
| Semiunica | Eine halbe Unze, ein Loth, 4 Quentlein. |
| Septem metalla | Sieben Metalle. |
| Septimana | Woche. |
| Sextarius | Ein halbes Maß [Nößel]. |
| Sextilis | Der Monat August. |
| Siccare, siccum | Trocknen, trocken. |
| Sigillum hermeticum | Hermetisches Siegel [zugeschmolzen]. |
| Signa! | Überschreibe es! |
| Simplex et compositum | Einfach und zusammengesetzt. |
| Sine stipitibus | Ohne Stiele. |
| Sine vino | Ohne Wein. |
| Soda | Soda. |
| Sol | Sonne [Gold]. |
| Solvere | Lösen. |
| Solvatio | Chemische Entbindung. |
| Species | Tee, Kräutergemisch. |
| Spiritus | Weingeist. [Das hiefür übliche Zeichen wurde auch in religiösen Schriften für „Geist" gebraucht]. |
| Spiritus Argenti | Silbergeist. |
| Spiritus Auri | Goldgeist. |
| Spiritus cyprius | Kupfergeist. |
| Spiritus frumenti | Branntwein. |
| Spiritus plumbi albi | Zinngeist. |
| Spiritus tartarisatus | Tartarisierter Weingeist. |
| Spiritus vini rectif. | Allerstärkster Branntwein. |
| Spiritus per ascensum | Über sich gestiegener Geist. |
| Spiritus per descensum | Unter sich getriebener Geist [die Destillation „per descensum" geschah in einem eigens dazu konstruierten Ofen und wurde meist zur Darstellung brenzlicher Öle gebraucht. Die Materie wurde im oberen Teil der zweibauchigen Blase eingelagert und erhitzt. Das Destillat sammelte sich im unteren Teil und wurde dort abgelassen. |
| Spiritus volans | Quecksilber. |
| Squama aeris cyprii | Kupferspäne. |
| Squama argenti | Silberspäne. |
| Squama chalybis | Eisenspäne. |
| Stannum | Zinn. |
| Stratum super stratum | Schichtenweise. |
| Sublimare | Sublimieren. |
| Sub cinere | Unter Asche. |
| Succinum | Bernstein, Agtstein. |
| Succinum album | weißer Bernstein. |
| Succinum citrinum | Bernstein, Agtstein. |

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|---|---|
| Succus | Saft. |
| Sulfur | Schwefel. |
| Sulfur caballinum<br>Sulfur nigrum | Schwarzer Schwefel, Rückstand aus der Sublimation der Schwefelerde. |
| Sulfur citrinum | Gelber [Stangen]schwefel. |
| Sulfur philosophorum | Philosophischer Schwefel. |
| Sulfur rubrum | Roter Schwefel. |
| Sulfur stillatitium | Tropfenschwefel. |
| Sulfur tartari | Weinsteintinktur. |
| Sulfur vivum | Lebendiger Schwefel. |
| Sulfur verum | „Echter" Schwefel. |
| Talcum | Talk. |
| Tartarus | Weinstein, aus Wein auskristallisiert. |
| Tartarus emeticus | Brechweinstein. |
| Tartarus nitratus | Salpetersaures Kalium. |
| Tartarus vitriolatus | Schwefelsaures Kalium. |
| Taurus | Stier [astrologisch]. |
| Tauri priapus | Farrenschwanz, Ochsenzimmer (Altdeutsch: Farren = Zuchtstier. Priapus ist der Name einer oft als unzüchtig dargestellten Flurgottheit. Ochsenrute. |
| Terebinthina | Terpentin. |
| Tepes archevorum | ? |
| Terra | Erde. |
| Terra foliata tartari | Blättrige Weinsteinerde. [Durch Glühen von Weinstein wurde Potasche hergestellt und diese dann mit destilliertem Essig neutralisiert. Mittelst eindampfen, in Wasser lösen, filtrieren und wieder eindampfen wurde das erhaltene Kaliumacetat gereinigt. |
| Terra Lemnia | Gesiegelte Erde von der Insel Lemno. |
| Terra sigillata | Gesiegelte Erde [es gab verschiedene Sorten; roter und weißer Bolus, der als Zeichen seiner Provenienz gestempelt wurde. Siegelerde wurde gegen Schlangengift und bei Verletzungen gebraucht]. |
| Terra virginea | Jungfernerde. |
| Test | „Testscherben" wurden gebraucht, um darin durch stärkstes Glühen die letzten Reste von Blei und Kupfer aus den Silberlegierungen zu entfernen [Peters]. |
| Testa | Scherbe. |
| Tetragonus | Viereck. |
| Tigillum | Tiegel |
| Tinctura | Tinktur. |
| Tingere | Tingieren: Umwandlung eines minderwertigen in ein edleres Metall mit Hilfe des Steines der Weisen. |
| Transmutatio | Transmutation: Umwandlung eines unedlen in ein edles Metall unter Einwirkung der „Tinktur". |
| Triangulus | Dreieck. |
| Tumor | Geschwulst, Auswuchs an Baumstämmen. |
| Tundere | Zerschlagen. |
| Turpethum minerale | Mineralischer Turpith [$HgSO_4$. HgO]. |
| Tutia | Hüttenrauch, Ofenbruch (Nebenprodukt der Messingfabrikation, enthält Zinkkarbonat u. Zinkoxyd. Heißt auch graue Galmei oder Cadmia). |
| Tutia officinarum | Zinkkarbonat oder Zinkweiß. |
| Ulcus | Geschwür, Schwiele. |
| Unica | Unze (= 2 Loth = 8 Quentlein). |
| Unica semis | Eine halbe Unze. |
| Urina | Harn. |
| Venereum martis | Kupfereisen. |
| Venus | Venus (astrologisch), Kupfer. |
| Ver | Frühling. |
| Vesica destillatoria | Destillierblase. |
| Vinum | Wein. |
| Vinum adustum | Branntwein. |
| Vinum album | Weißwein. |
| Vinum circulatum | Circulierter Wein. |

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|---|---|
| Vinum coctum | Gekochter Wein. |
| Vinum emeticum | Brechwein (Vinum antimonii). |
| Vinum Hyppocraticum | Hippocras-Wein. |
| Vinum medicatum | Kräuterwein. |
| Vinum mortuum | Essig. |
| Vinum purgativum | Abführwein. |
| Vinum rubrum | Rotwein |
| Vinum subliniatum | Sublimierter Wein. |
| Virgo | Jungfrau (astrologisch). |
| Viride aeris | Grünspan. |
| Vitellus | Eidotter. |
| Vitriolum | Kupferwasser Man hielt im Altertum und im Mittelalter Eisen-, Kupfer- und Zinkvitriol für verschiedene Arten desselben Stoffes. In reinem Zustande war keines dieser Salze bekannt. |
| Vitriolum album | Weißer Vitriol, Zinksulfat. |
| Vitriolum coeruleum | Kupfersulfat. |
| Vitrolum ad rubedinem calcinatum | Wohl mit Oxyd vermischtes metallisches Kupfer. |
| Vitriolum Romanum | Römischer Vitriol, ein eisenhaltiges Kupfersulfat. |
| Vitrum | Glas. |
| Vitrum Antimonii | Spießglasglanz. |
| Vitrum Saturni | Bleiweiß, Bleizucker. |
| Viride Graecum | Grünspan. |
| Viride Hispanicum | Grünspan. |
| Volatile | Flüchtig, nicht feuerbeständig. |

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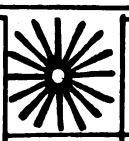
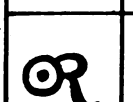
# TAFEL 1

| | | | |
|---|---|---|---|
| | **Alumen,** Aurum, Ol. commune, Nox, Antimonii vitrum |  | **Sol, Aurum** |
|  | Fimus equinus, Ol. coctum, Nix, Arsenicum album | | **Sol, Aurum** |
|  | Ovum | | Regulus |
| | Alumen | | **Sol, Aurum,** Auri calx. |
| | Alumen | | Crocus solis |
| | Autumnus |  | Aurum |
|  | Aurum | | Crocus Auri |
|  | Arsenicum, Antimonii vitrum | | Aurichalcum |
|  | Alumen plumosum | | Aurum |
|  | Lapis calaminaris | | Sal Urinae |
| | Aurum | | Sal marinum |
| | Urina | | Auripigmentum |
| | Urina | | Bezoardicum solare, Aurum |
| | Operatorium | | Auripigmentum |
| | Urina | | Aurum foliatum |

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# TAFEL 2

| | | | |
|---|---|---|---|
| | Venus | | Arsenicum album |
| | Venus | | Annus |
| | Nitrum commune | | Sal Tartari fix |
| | Caput mortuum, Sal ammoniatum | | Cuprum caldarium |
| | Sal Urinae | | Sal Tartari fix |
| | Cuprum caldarium | | 'Albumen, Ol. Tartari, Ol. destillatum |
| | Vinum mortuum | | Ol. commune |
| | Caput mortuum | | Ignis Reverberii, Ignis Rotae, Ignis circulatorius |
| | Calx, Farina, Aurum, Calx metallorum | | Argentum |
| | Vinum adustum | | Vinum circulatum |
| | Limatura | | Coagulatum |
| | Bezoar orientale | | Coagulatum |
| | Bezoar occidentale | | Alumen plumosum |
| | Aurum | | Alumen plumosum |
| | Arsenicum album | | Cinnabaris |

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# TAFEL 3

| | | | |
|---|---|---|---|
| | Calx | | Marcasita, Conchae |
| | Nitrum commune | | Ahenum |
| | Lutum | | Sal commune |
| | Nitrum, Marcasita | | Sal alcali |
| | Acide nitrique (Geoffroy) | | Sal alcali |
| | Colcothar |  | Sal volatile |
| | Colcothar | | Sal ammoniatum |
| | Colcothar ad rubedinem calcinatum | | Sal Tartari |
| | Sal ammoniacum | | Sal alcali fixe (Geoffroy) |
| | Aerugo, Aes dest., Vitriol. alb., Sulfur verum, Sulfur stillatitium | | Sal alcali volatile (Geoffroy) |
| | Sulfur stillatitium | | Sal acidum |
| | Vitriolum | | Acid. sal. marin. (Geoffroy) |
| | Cinnabaris, Ol. Vitrioli | | Ahenum |
| | Sal commune, Aes viride, Alumen ustum | | Antimonium spagyriae praeparat., Sal commune. |
| | Sal alcali | | Mel, Testa |

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# TAFEL 4

| | |
|---|---|
| | Antimonium |
| | Spiritus salis |
| | Fortax |
| | Alumen plumosum, Cinnabaris |
| | Athenaeum |
| | Aes ustum |
| | Ahenum |
| | Sal praeparatum |
| | Aerugo, Viride aeris, Aes viride, Cristallus |
| | Viride aeris |
| | Vitriolum Hungaricum |
| | Vitriolum Hungaricum |
| | Extract. Salis |
| | Cristallus |
| | Vitriolum |
| | Sal petrae, Consistum |
| | Borax |
| | Borax |
| | Marcasita |
| | Sal armoniacum |
| | Viride Aeris, Vitrum |
| | Viride Aeris, Viride Graecum, Viride Hispanicum |
| | Crocus Veneris |
| | Mel |
| | Caput mortuum |
| | Talcum, Aerugo, Aes viride, fricare |
| | Lapis cristallinus |
| | Alumen cativum, Aurum, Sal alcali |
| | Antimonii vitrum |
| | Aurum |

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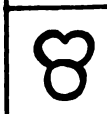
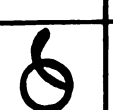
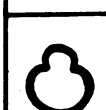
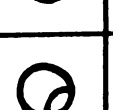
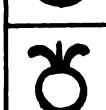
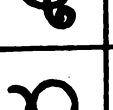
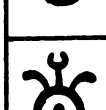
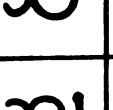
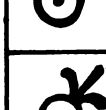
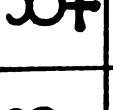
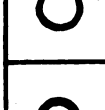
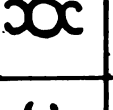
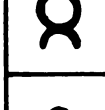
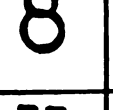
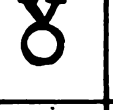
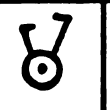
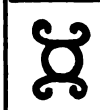
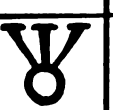
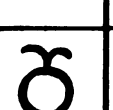
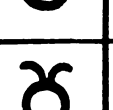
# TAFEL 5

| | | | |
|---|---|---|---|
| | Alumen | | Taurus |
| | Alumen plumosum |  | Cinnabaris |
|  | Alumen plumosum |  | Vitrum |
|  | Alumen plumosum |  | Aurum |
|  | Platina |  | Marcasita aurea |
|  | Argentum vivum |  | Aurum |
|  | Sal armoniacum |  | Cobaltum, Sal alcali |
|  | **Tauri priapus,** Sal gemmae, Lapis haematit. Marcasita, Bismutum, Gummi, Borax, Arsenicum album |  | Alcali |
|  | Alumen, Alumen plumosum | | Sal commune |
|  | Vitellus | | Sal alcali |
| | Marcasita aurea | | Ol. salis nitri |
|  | Sal commune |  | Ol. salis nitri |
|  | **Realgar,** Tauri priapus | | Ol. salis nitri |
|  | Capricornus | | Sal gemmae |
|  | Marcasita | | Sal gemmae |

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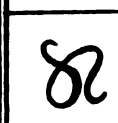
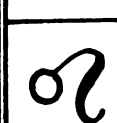
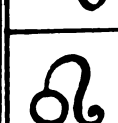
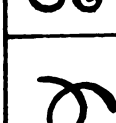
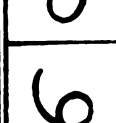
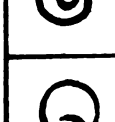
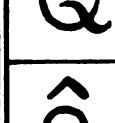
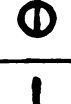
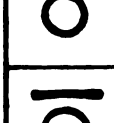
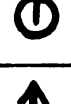
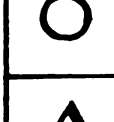
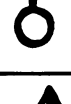
# TAFEL 6

| | | | |
|---|---|---|---|
| | Hora | | Alumen, dies |
| | Solvere | | Antimonium spagyriae praeparatum |
|  | Borax | | Fel vitri |
|  | Solvere | | Antimonium spagyriae praeparatum, Tutia |
|  | Leo | | Antimonii hepar |
|  | Retorta turbulata | | Flores Antimonii |
|  | Auri calx | | Vitrum, Realgar |
| | Spiritus nitri | | Aq. vitae |
|  | Fimus equinus, Lapis cristallinus | | Nitrum commune |
|  | Zincum |  | Borax |
|  | Destillare |  | Ferrum |
|  | Drachma |  | Ferrum |
| | Spiritus nitri | | Magnesia |
| | | | Crucibulus, Crucibulum |
| | | | Lapis calaminaris |

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# TAFEL 7

| | | | |
|---|---|---|---|
| | Cucurbita | | Realgar |
| | Vitrum, Vinum sublimatum | | Tauri priapus |
| | Lapis calaminaris | | Capricornus |
| | Alumen saccharinum | | Marcasita aurea |
| | Alumen saccharinum | | Sal commune |
| | Oleum dest., Phiola | | Diaphoreticum martiale |
| | Lapis calaminaris | | Diaphoreticum martiale |
| | Borax | | Aurum |
| | Aurum | | Aurum |
| | Aurum | | Viride aeris |
| | Destillare | | Antimonium |
| | Destillare | | Ferrum |
| | Marcasita | | Nitrum commune |
| | Vitellus, Alumen | | Nitrum commune |
| | Hora | | Crocus metallorum |

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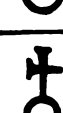
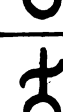
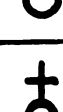
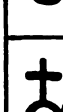
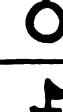
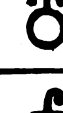
# TAFEL 8

| | | | |
|---|---|---|---|
| | Antimonium | | Antimonii flores |
| | Cinnabaris | | Plumbum, Saturnus |
| | Aurum | | Plumbum, Saturnus |
| | Nitrum commune | | Plumbum, Saturnus |
| | Terra | | Antimonii hepar |
| | Antimonium, Antimonii Regulus, Vitrum, Borax, Testa, Antimonium spagyriae praeparatum | | Antimonii vitrum |
|  | Guttae vitri | | Argentum vivum, Hydrargyrum |
|  | Antimonii Regulus | | Diaphoreticum martiale |
|  | Cinnabaris |  | Diaphoreticum martiale |
| | Cinnabaris verum | | Ferrum |
| | Bezoardicum minerale | | Ferrum, Vitriolum |
| | Antimonium | | Sulfur Antimonii |
|  | Antimonii flores | | Crocus |
| | Antimonii vitrum | | Antimonii Regulus |
|  | Antimonii flores | | Antimonii Regulus |

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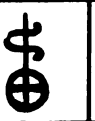
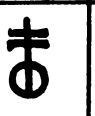
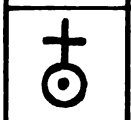
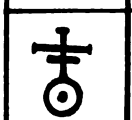
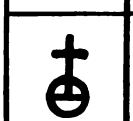
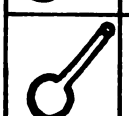
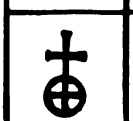
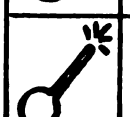
# TAFEL 9

| | | | |
|---|---|---|---|
| | Regulus Antimonii martiatus | | Granatus |
| | Regulus Antimonii medicin. | | Nitrum commune |
| | Antimonii vitrum | | Cinnabaris |
| | Minera Antimonii |  | Crocus metallorum |
| | Vitrum Antimonii | | Cinnabaris, Pulvis |
| | Cinnabaris, Pulvis |  | Lapis granatus |
| | Vitriolum | | Bolus Armena |
| | Pulvis | | Cinnabaris nativa |
| | Cuprum | | Cinnabaris Antimonii |
|  | Antimonii (Regulus), Aurum | | Dies |
| | Cinnabaris | | Aurum |
|  | Vitriolum, Atramentum | | Phiola |
| | Eisenschwefel | | Lapis calaminaris |
|  | Granatus |  | Spiritus vini |
|  | Granatus |  | Aqua Regis |

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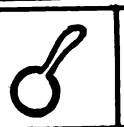
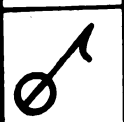
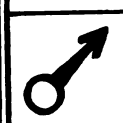
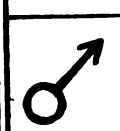
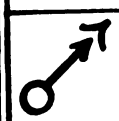
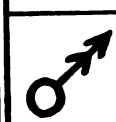
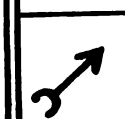
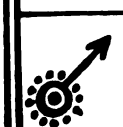
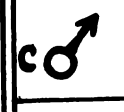
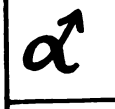
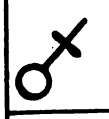
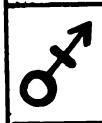
# TAFEL 10

| | |
|---|---|
|  | Borax |
| | Creta |
| | Retorta |
| | Dies |
| | Plumbum |
|  | Plumbum |
| | Sulfur verum |
| | Tutia |
| | Atramentum album |
|  | Guttae vitri |
|  | Ferrum, Mars |
|  | Regulus martiatus |
|  | Regulus martiatus (ferri) |
|  | Ferrum |
|  | Bezoardicum martiale |
|  | Crocus martis |
|  | Ferrum |
| | Limatura ferri |
| | Retorta |
| | Bolus communis |
|  | Calx viva |
| | Arsenicum album |
| | Pulvis |
| | Antimonii flores |
|  | Crocus martis, Mars |
| | Ferrum, Mars |
| | Alumen plumosum |
| | Crocus martis |
| | Dies |
| | Diaphoreticum martiale |

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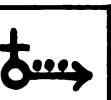
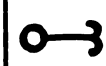
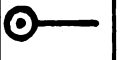
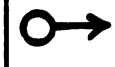
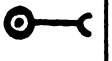
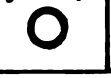
# TAFEL 11

| | | | |
|---|---|---|---|
| | Regulus Antimonii martiatus |  | Diaphoreticum martiale |
| | Regulus ferri | | Dies |
| | Aurum | | Dies |
| | Limatura auri | | Alumen |
| | Dies | | Vitriolum, Atramentum |
| | Guttae vitri | | Acide vitriolique (Geoffroy) |
| | Urina | | Vitriolum, Atramentum |
|  | Fluere | | Vitriolum |
| | Vitrum | | Vitriolum, Atramentum |
| | Leo |  | Aurum |
|  | Ferrum |  | Gummi |
| | Regulus ferri | | Cuprum |
| | Eisenkupfer | | Crocus Veneris |
| | Cuprum | | Limatura Stanni |
| | Limatura chalybis |  | Destillare |

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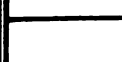
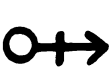
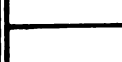
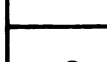
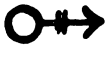
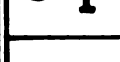
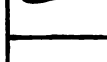
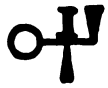
# TAFEL 12

| | | | |
|---|---|---|---|
| | Cuprum | | Vitriolum; neuere Form: |
|  | Colcothar | | Vitriolum |
| | Crocus veneris | | Oleum vitrioli |
| | Argentum vivum | | Crocus veneris |
|  | Ferrum | | Alumen ustum |
| | Magnesia | | Sal urinae |
|  | Viride aeris | | Sal urinae |
|  | Viride aeris | | Lapis calaminaris |
| | Aurum | | Lapis calaminaris |
| | Aurum | | Alumen plumosum |
| | Viride aeris |  | Alumen plumosum |
|  | Spiritus vini | | Sal ammoniacum |
| | Cuprum | | Sal ammoniacum |
|  | Aes ustum |  | Sal ammoniacum |
|  | Aes ustum | | Sal ammoniacum |

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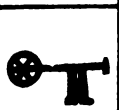
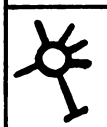
# TAFEL 13

| | | | |
|---|---|---|---|
| | Aes ustum | | Retorta |
|  | Aes viride | | Argentum |
| | Bolus Armena | | Argentum |
| | Vitriolum Romanum | | Acetum destillatum |
| | Sol, Aurum | | Aurum |
| | Phlegma (Aq. insipida) | | Nox, destillare, Alumen catinum, Cuprum, Venus, Menstruum, Tigillum, Crucibulum |
| | Aurum | | Tartarus |
| | Aurum | | Ferrum |
| | Limatura auri |  | Acetum destillatum |
| | Marcasita | | Caput mortuum |
| | Marcasita | | Treibscheibe |
| | Aurum | | Venus, Cuprum |
| | Lithargyrum, Argentum (Levor argenti) | | Fumus |
| | Limatura chalybis, Limatura ferri | | Sulfur verum |
| | Retorta | | Oleum per deliquium |

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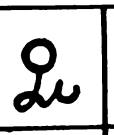
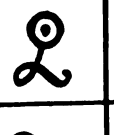
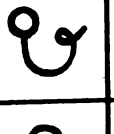
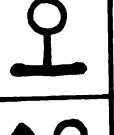
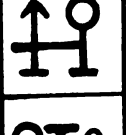
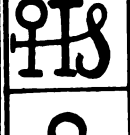
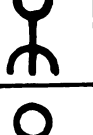
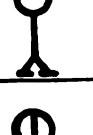
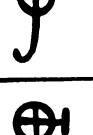
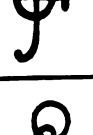
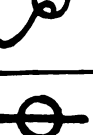
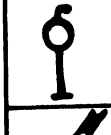
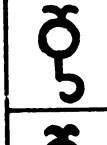
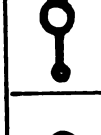
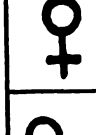
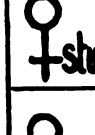
# TAFEL 14

| | |
|---|---|
|  | Fumus |
|  | Cuprum |
|  | Purificatio |
| | Ferrum |
|  | Flos aeris |
|  | Aes viride |
|  | Lana illota |
| | Argentum vivum |
|  | Crocus Veneris |
|  | Ferrum |
| | Virgo |
|  | Vitriolum album |
|  | Bolus Armena |
|  | Vitriolum album |
| | Sal commune |
| | Viride aeris |
| | Sal tartari essentiale |
| | Marcasita |
|  | Crocus Veneris |
| | Crocus Veneris |
| | Marcasita |
|  | Viride aeris |
| | Viride aeris |
| | Argentum vivum |
|  | Mercurius praec. albus |
| | Arsenicum album |
| | Arsenicum |
|  | Cuprum, Venus, Aes, Tutia, Kesselbraun, Crocus Veneris, Cuprum ust. |
|   | Aes ustum |
| | Crocus Veneris |

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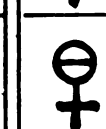
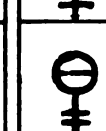
# TAFEL 15

| | |
|---|---|
| | Crocus Veneris |
| | Auripigmentum |
| | Aes ustum |
| | **Aes ustum** |
| | Arsenicum album |
| | **Crocus Veneris** |
| | Crocus Veneris |
| | Viride aeris |
| | Crocus Veneris |
| | Limatura Veneris |
| | Bezoardicum venereum |
| | **Aes ustum**, Cuprum, Venus, Aurichalcum, Crocus Veneris, Glockenspeis, Arsenicum alb. |
| | **Aurichalcum** |
| | Marcasita |
| | Oel oder Sulfur aus der Materia Philosophorum |
| | Crocus Veneris, Cinnabaris, Aurichalcum |
| | Aes, Cuprum, Venus |
| | Bezoardicum venereum, Bezoardicum minerale |
| | Squama aeris Cyprii |
| | **Menstruum**, Venus, Bolus Armena, Lapis calaminaris, Lapis Prunellae, Pilulae salis petrae |
| | Pilulae salis petrae |
| | Lapis calaminaris |
| | Lapis Prunellae |
| | Acetum |
| | Sal commune |
| | Tartarus calcinatus |
|  | Sulfur, Ol. sulfuris, Lapis Prunellae, Pilulae salis petrae |
| | Sulfur |
|  | Pulvis |
| | Cinnabaris |

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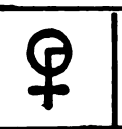
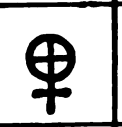
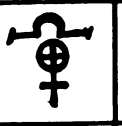
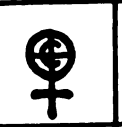
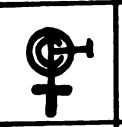
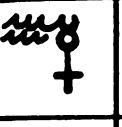
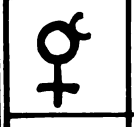
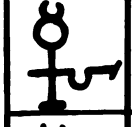
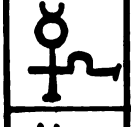
# TAFEL 16

| | |
|---|---|
|  | Cuprum |
|  | Spiritus Tartari |
|  | Ol. sulfuris |
|  | Tartarus calcinatus |
|  | Sal tartari pulv. |
| | Mercurius vivus, Hydrargyrum, Mercur. sublimatus, Minium |
|  | Aqua Mercurii |
| | Mercurius praec. alb. |
|  | Crocus Veneris |
| | Metalla septem |
| | Mercurius Saturni |
| | Mercurius Saturni |
|  | Mercurius praecipitatus |
|  | Mercurius sublimatus |
| | Mercurius vitae |

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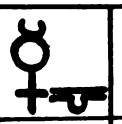
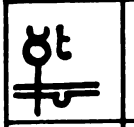
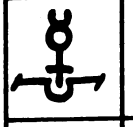
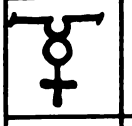
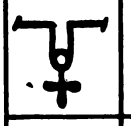
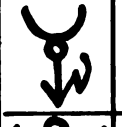
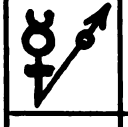
|---|---|
|  | Mercurius praec. alb |
|  | Mercur. praec. rubr. |
| | Mercurius sublimatus |
|  | Mercur. praec. alb. |
| | Arsenicum sublimatum |
|  | Mercurius sublimatus |
| | Mercurius Saturni praec., Minium |
|  | Minium |
| | Arsenicum sublimatum |
| | Mercurius vivus |
|  | Mercurius vivus |
| | Mercurius Saturni praec., Minium |
| | Spiritus Mercurii, Mercurius Lunae |
|  | Mercurius Martis |
| | Argentum vivum |

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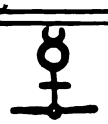
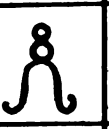
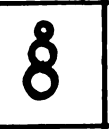
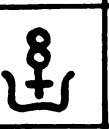
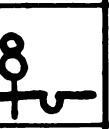
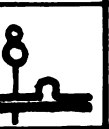
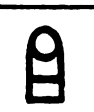
# TAFEL 17

| | | | |
|---|---|---|---|
|  | Mercurius praecipitatus albus | | Sal alcali |
| | Spiritus Mercurii | | Flores virides aeris |
| | Mercurius sublimatus | | Crocus veneris |
| | Aqua mercurialis<br>(Siehe auch unter 8.) | | Alumen ustum |
| | Mercurius vivus | | Sal commune |
| | Mercurius sublimatus | | Oleum commune |
|  | Vinum album | | Cucurbita, Cocca |
|  | Mercurius Saturni praecipitatus, Minium | | Tartarus |
|  | Mercurius vivus | | Digerirofen |
|  | Mercurius praecip. alb. | | Digerirofen |
|  | Minium | | Acetum |
| | Mercurius sublimatus | | Tigillum |
| | Spiritus mundii |  | Digerirofen |
| | Spiritus mundii | | Tigillum |
| | Mercurius praec. alb. | | Ol. Tartari Sennerti |

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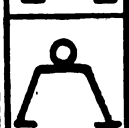
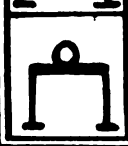
# TAFEL 18

| | |
|---|---|
| | Ol. Tartari Sennerti |
| | Ol. Tartari Sennerti |
| | Lithargyrum, Aurum |
| | Lithargyrum, Aurum |
| | Lithargyrum, Aurum |
| | Sal Tartari |
| | Sal Tartari fixum |
| | Oleum Tartari |
| | Oleum Tartari |
| | Vinum sublimatum |
| | Matras |
| | Acetum |
| | **Sal alcali** |
|  | Sal alcali |
|  | Oleum commune |

| | |
|---|---|
| | **Alembicus,** Alembicum |
| | Alembicus |
| | Sal commune |
| | Aurum |
| | Cristallus |
| | Cristallus |
| | Cristallus |
| | Bismutum, Marcasita argentea |
| | Oleum per deliquium |
| | **Filtrare** |
| | **Filtrare** |
| | |
| | **Nox** |
| | Sulfur verum |
| | Ferrum |

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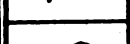
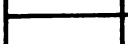
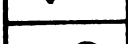
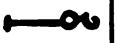
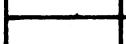
# TAFEL 19

| | | | |
|---|---|---|---|
| | Vitriolum alb. | | Crocus Martis |
| | Argentum pictorium | | Dies |
|  | Destillare |  | Cuprum |
| | Ferrum | | Ferrum |
| | Ferrum | | Crocus Martis |
| | Bolus | | Crocus Martis |
| | Lapis pumex | | Bolus communis |
|  | Vitriolum alb. | | Fluere |
| | Vitriolum alb. | | Arsenicum sublimatum |
| | Tutia | | Ol. Tartari Sennerti |
| | Marcasita | | Arsenicum sublimatum |
| | Sal gemmae |  | Sol |
| | |  | Aurum |
| | Dies | | Aurum |
| | Dies | | |

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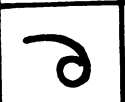
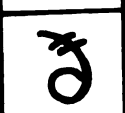
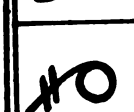
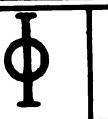
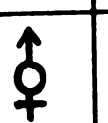
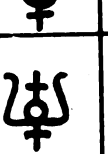
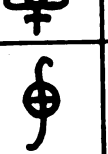
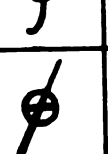
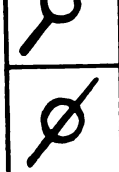
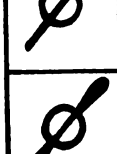
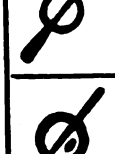
# TAFEL 20

| | |
|---|---|
| | Dies |
| | Arsenicum sublimatum |
| | Fluere |
|  | Recipiens, Retorta, Cornutum |
|  | Receptaculum |
| | Retorta, Cornutum |
| | Retorta |
|  | Recipiens, Retorta, Cornutum |
| | |
| | |
| | |
| | |
| | |
| | |

| | |
|---|---|
|  | Flores virides aeris |
| | Aurum |
| | Mars |
|  | Venereum Martis |
| | Crocus Veneris, Lapis haematites |
| | Argentum vivum |
| | Mercurius vivus |
|  | Mercurius vivus |
|  | Sal sedativum |
|  | Sulfur |
| | Fricare |
| | Arsenicum sublimatum |
|  | Massa (pilularum), Ol. talchi, Flores virides aeris, Mercurius vivus |
|  | Argentum pictorium |
|  | Massa (pilularum) |

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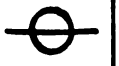
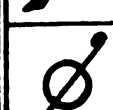
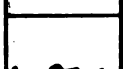
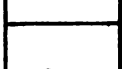
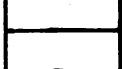
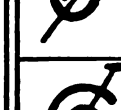
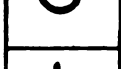
# TAFEL 21

| | | | |
|---|---|---|---|
| | Talcum |  | Nitrum commune, Sal commune |
| | Eisenkupfer | | Alumen ustum |
| | Aurum pictorium | | Fornax, Windofen |
| | Massa (pilularum) | | Cuprum caldarium, Glockenspeis |
| | Aurum pictorium | | Sal volatile |
|  | Aurum pictorium | | Sal volatile |
| | Aurum pictorium | | Aes ustum |
| | Aurum pictorium |  | Fluere |
| | Arsenicum sublimatum |  | Venereum Martis |
| | Massa (pilularum) |  | Aurum musicum |
| | Massa (pilularum) | | Aurum |
| | Massa (pilularum) | | Cinnabaris |
|  | Spiritus nitri |  | Spiritus, Magnet |
| | | | Sal commune |
| | | | Cinnabaris |

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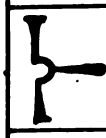
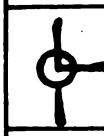
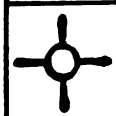
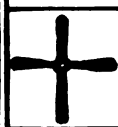
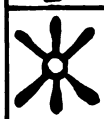
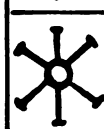
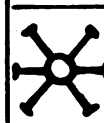
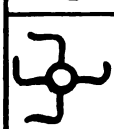
# TAFEL 22

| | | | |
|---|---|---|---|
| | Spiritus | | Aurum |
| | Bolus Armena | | Arsenicum album |
| | Oleum salis nitri | | Marcasita |
| | Sal urinae | | Crocus |
| | Aurum |  | Oleum coctum |
| | Borax | | Ol. expressum, Ol. commune |
| | Sal Tartari |  | Ol. expressum, Ol. commune |
| | Arsenicum album | | Ol. expressum, Ol. commune |
|  | Cera, Lapis haematites, commune, Crocus Veneris | | Spiritus Aluminis |
|  | Cuprum |  | Acetum destillatum |
| | Cera citrina |  | Lux sextilis |
| | Cera citrina |  | Acetum destillatum |
|  | Atramentum | | Fricare |
| | Arsenicum album | | Aurum, Sol |
| | Arsenicum | | Aurum, Sol |

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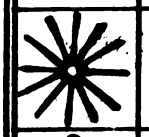
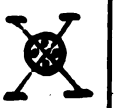
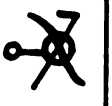
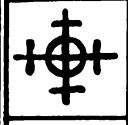
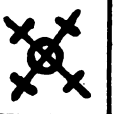
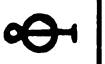
# TAFEL 23

| | | | |
|---|---|---|---|
| | Urina | | Aes viride |
|  | Aurum, Sol | | Aes viride |
| | Lapis haematites |  | Caput mortuum |
| | Aes dest., Sal commune, Aerugo, Oleum expressum | | Aes viride |
| | Lapis calaminaris | | Mel |
| | Lapis Magnes |  | Mel |
|  | Sal commune |  | Calcinatio Auri |
| | Aes destillatum | | |
| | Sal gemmae | | Arsenicum album |
| | Urina | | Materia |
| | Urina | | Aurum |
| | Spiritus | 69 | Cancer |
| | 1 gemeiner Monat | | Ol. empyreumaticum |
| | 2 gemeine Monate (= 1 philosoph. Monat) | | Aurum |
| | Aes viride, Calx Solis, Tutia |  | Crocus Martis |

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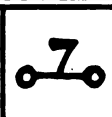
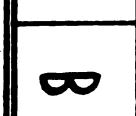
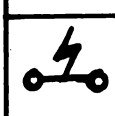
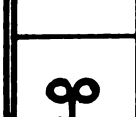
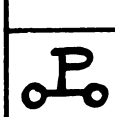
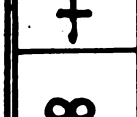
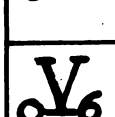
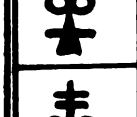
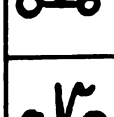
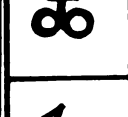
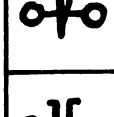
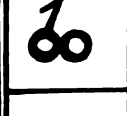
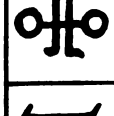
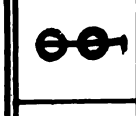
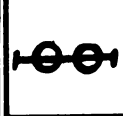
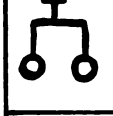
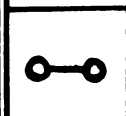
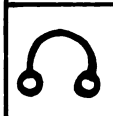
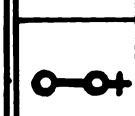
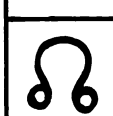
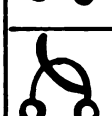
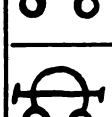
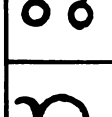
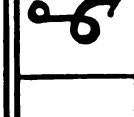
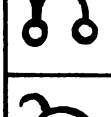
# TAFEL 24

| | | | |
|---|---|---|---|
| | Ignis fortis |  | Arsenicum rubrum |
|  | Nox |  | Arsenicum rubrum |
|  | Vitrum |  | Sublimare |
|  | Guttae vitri |  | Arsenicum rubrum |
|  | Sulfur nigrum |  | Arsenicum rubrum |
|  | Alumen |  | Cerussa |
|  | Crocus Martis |  | Ol. commune |
|  | Lutum philosophorum | | Ol. commune (Olivae) |
|  | Arsenicum |  | Arsenicum |
|  | Tutia |  | Leo |
|  | Mel |  | Destillare |
| | Mel |  | Sal alcali |
| | Cineres Plumbi |  | Realgar |
| | Acid. arsenici (Scheele) |  | Realgar |
|  | Levor Auri |  | Realgar |

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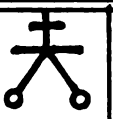
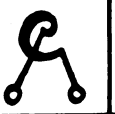
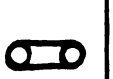
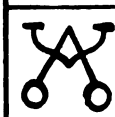
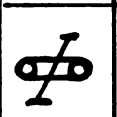
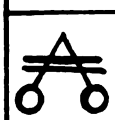
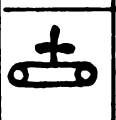
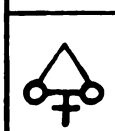
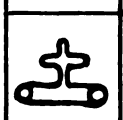
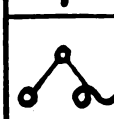
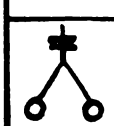
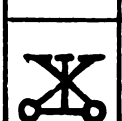
# TAFEL 25

| | | | |
|---|---|---|---|
| | Realgar |  | Sulfur nigrum |
| | Arsenicum album |  | Arsenicum rubrum |
| | Realgar | | Drachma, Arculatio, Realgar, purificare |
| | Viride aeris | | Arsenicum alb. |
| | Realgar | | Purificare, Muffel |
| | Philosophorum | | Fimus equinus |
| | Lapis magnes, Cineres Stanni | | Argentum |
| | Arsenicum alb. | | Argentum |
| | Lapis magnes, Cineres Stanni | | Borax |
| | Lapis magnes, Cineres Stanni |  | Auripigmentum, Arsenicum, Jupiter |
|  | Lapis magnes, Cineres Stanni |  | Sal petrae |
|  | Sulfur nigrum |  | Alumen ustum |
|  | Sulfur arsenici |  | Alumen ustum |
|  | Realgar | | Sublimatorium |
|  | Sulfur nigrum |  | Auripigmentum |

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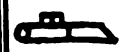
# TAFEL 26

| | |
|---|---|
| | Auripigmentum |
| | Alumen ustum |
| | Borax |
|  | Alumen ustum |
| | Receptaculum |
| | Vitriolum |
| | Vitriolum |
| | Sal petrae |
| | |
| | Cobaltum, Sal alcali |
| | Aes dest., Alcali, Aqua vitae, Aurum (Siehe auch unter 8) |
| | Cinnabaris |
| | Hydrargyrum |
| | Argentum vivum |
| | Argentum vivum |

| | |
|---|---|
| | Arsenicum alb. |
| | Antimonium spagyriae praeparatum |
| | Crocus Veneris, Antimonium spagyriae praeparatum |
| | Aurum potabile |
| | Spiritus Auri |
| | Antimonium |
| | Crocus Veneris |
| | Crocus Veneris |
| | Mercurius praec. alb. |
| | Arsenicum alb. |
| | Tartarus calcinatus |
| | Retorta |
| | Destillare |
| | Tartarus calcinatus |
| | Arsenicum alb., Lithargyrum argenteum |

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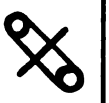
# TAFEL 27

| | |
|---|---|
| | Arsenicum alb. |
| | Fimus equinus |
| | Succus |
| | Succus |
| | Sal gemmae |
| | Sal gemmae |
| | Oppositio, Aes ustum, Limatura ferri, Plumbum, Sulfur verum, Aurichalcum, Aurum, destillare |
| | Aurum pictorium, Aurum potabile |
| | Aurichalcum |
| | Sal gemmae, Ursand, Lapis calaminaris, Arsenicum album |
| | Sal gemmae |
| | Dies et Nox |
| | Cancer |
| | Arsenicum album |
| | Arsenicum album |

| | |
|---|---|
| | Crocus Veneris |
| | Aurum potabile |
| | Crocus veneris |
|  | Vitrum |
| | Cucurbita |
| | |
| | Conchae |
| | Oleum, Oleum tartari |
| | Ol. tartari Sennerti |
| | Ol. tartari Sennerti |
| | Argentum |
| | Spiritus vini |
| | Mel |
| | Mel |
| | Argentum |

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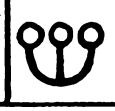
# TAFEL 28

| | | | |
|---|---|---|---|
| | Auripigmentum | | Calx (metallorum) |
| | Atramentum | | Arsenicum album |
| | Fimus equinus | | Gummi |
| | Fimus equinus | | Lutum philosophorum |
| | | | Nitrum commune |
| | | | Arsenicum album |
| | Lapis silex | | Arsenicum album |
| | Oleum coctum, Oleum Olivarum, Ol. commune | | Arsenicum album |
| | Aqua vitae | | Viride aeris |
| | Aqua vitae, Sal alcali | | Camphora |
| | Auripigmentum | | Camphora |
| | Sulfur | | Argentum vivum |
| | Lignum | | Acetum ter destillatum |
| | Creta | | Carbones |
| | Lapis silex ustus |  | Ferrum |

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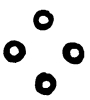
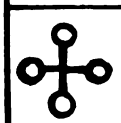
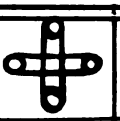
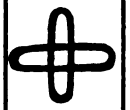
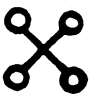
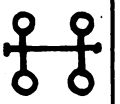
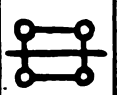
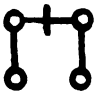
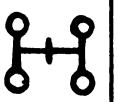
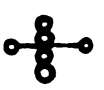
| | |
|---|---|
| | Minium |
| | Auripigmentum |
| | Auripigmentum |
| | Atramentum album, Nitrum commune, Vitriol. commune, Vitriol. Romanum |
| | Mercurius aeris |
| | Viride aeris |
| | Viride aeris |
| | Viride aeris |
| | Oleum vitrioli |
| | Oleum vitrioli |
| | Oleum vitrioli |
| | |
|  | Oleum essentiale |
| | Argentum, Oleum coctum, Sulfur nigrum |
|  | Atramentum, Vitriolum, Ferrum, Arsenicum rubrum, Argentum vivum |

| | |
|---|---|
|  | Auripigmentum, Resigallum |
|  | Sal gemmae |
| | Arsenic. sublimatum |
| | Vitriolum album |
|  | Auripigmentum, Tigillum, Crocus Veneris |
| | Antimonium spagyriae praeparat. |
|  | Antimonium |
|  | Antimonium |
|  | Elementum |
|  | Elementum |
| | Sal gemmae |
| | Calx viva |
| | Materia prima |
|  | Materia prima |
| | Gummi |

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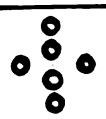
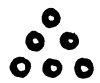
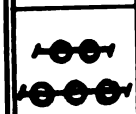
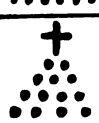
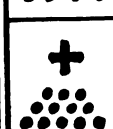
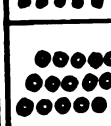
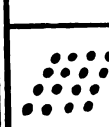
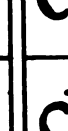
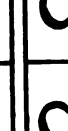
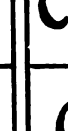
# TAFEL 30

| | | | |
|---|---|---|---|
|  | Materia prima | | Argentum, Scrupuli quinque, Cornu |
|  | **Arena,** Calx | | **Argentum,** Borax, Luna decrescens |
|  | Arena | | Argentum pictorium (gemahlen Silber) |
| | Aq. vitae | | Cristallus, Lapis cristallinus |
| | Arena | | Argentum pictorium |
| | Arena | | Plumbum, Ol. tartari, Corpus, gemahlen Silber |
| | Balneum arenae | | Antimonii regulus |
| | Balneum arenae | | Crocus metallorum |
| | Arena | | Calx |
|  | Arena | | Vinum coctum |
|  | Arena | | Crocus martis |
|  | Arena | | **Crocus martis** |
|  | Cinis |  | Cristallus, Lapis cristallinus |
| | Cinis |  | Cristallus, Lapis cristallinus |
| | |  | Argentum, Cristallus, Calx, Aqua, Plumbum, Cuprum, Venus, Crocus Martis, Cornu, Coagulatio, completus, Tutia, Scrupuli quinque, Fimus equinus |

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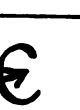
| | |
|---|---|
| | Fimus equinus |
| | Retorta |
| | Siehe auch unter Buchstabe Cl |
| | Retorta |
| | Retorta |
| | Cinis |
| | Scrupulus semis |
| | Caput mortuum |
| | Ignis circulatorius, Vinum circulatorium |
| | Cristallus, Lapis cristallinus |
| | Calx viva |
| | Bolus communis |
| | Fimus equinus |
| | Fimus equinus |
| | Calcinare |

| | |
|---|---|
| | Viride aeris |
| | Pulverisare |
| | Argentum |
| | Alumen ustum |
| | Alumen |
| | Lixivium |
| | Capricornus |
| | Lutum |
| | Ignis cinereum |
| | Jupiter |
| | Auri calx |
| | Ochra plumbea |
| | Crocus Martis |
|  | Cinis |
| | Terra sigillata |

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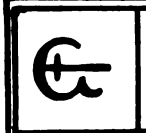
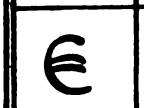
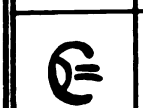
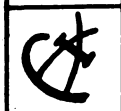
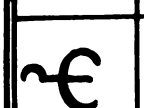
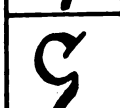
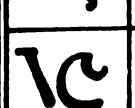
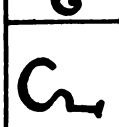
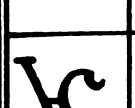
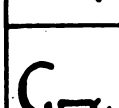
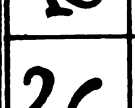
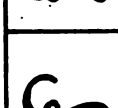
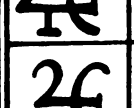
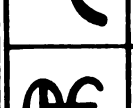
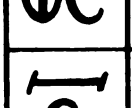
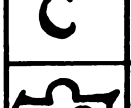
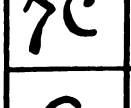
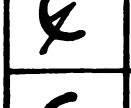
# TAFEL 32

| | | | |
|---|---|---|---|
|  | Terra sigillata | | Tartarus |
|  | Scrupulus semis | | Mercurius |
|  | Calx |  | Lignum |
|  | Crocus martis | | Coagulatio |
| | Cinere lixivio elicere |  | Plumbum |
|  | Plumbum ustum |  | Calcinare |
|  | Plumbum ustum |  | Cerussa |
|  | Lazura |  | Corpus |
|  | Crocus martis | | Calcinare |
|  | Crocus Veneris | CC | Cornu cervi, Cucurbita |
|  | Calcinare | CCV | Cornu cervi ustum |
| | Calx viva | col. | Colatura |
|  | Calx viva | colat | Colatura |
|  | Ver | compl. | Completus |
|  | Calx viva | c.p. | Libra civilis |

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# TAFEL 33

| | | | |
|---|---|---|---|
| cqo | Calx ovorum | | Argentum, Cinnabaris, Obulus dimidius, Scrupulus. |
| C.V. | Cum vino, Calx viva | | Luna crescens, Argentum |
| | Sal gemmae | | Cinnabaris, Arsenicum album |
| | Cornu cervi ustum | | Lithargyrum argenteum |
| | Cornu cervi ustum | | Lithargyrum argenteum |
| | Commixtio | | Argentum foliatum |
| c | Destillare per cineres | | Limatura argenti |
| | Calcinare | | Bezoardicum lunare. Caput mortuum |
| | Destillare | | Caput mortuum |
| | Retorta | | Destillare |
| | Retorta | | Fimus equinus |
| | | | Argentum |
| | | | Argentum pictorium |
| | | | Argentum pictorium |
| | | | Argentum pictorium |

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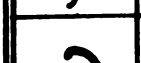
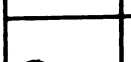
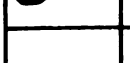
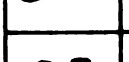
# TAFEL 34

| | | | |
|---|---|---|---|
| | Magnesia | | Antimonium spagyriae praep., Crocus Veneris |
| | Atramentum album | | Lithargyrum argenteum |
| | Argentum, Acetum destillatum | | Cinis, Vitriolum album |
|  | Plumbum philosophorum, Acetum destillatum | | Mercurius vivus |
| | Obulus unus | | Argentum vivum |
| | Acetum destillatum | | Mercurius vivus |
| | Vinum | | Compositio, Sal alcali |
| | Crocus martis |  | Lithargyrum argenteum |
| | Scrupulus, Luna, Aes dest. | | Stratum super stratum |
| | Scrupulus unus | | Cineres Plumbi |
| | Scrupulus semis | | Hora |
| | Scrupulus semis |  | Hora |
| | Scrupuli tres (=Drachma una) | | Calcinare |
| | Aurum |  | Lutum philosophorum |
| | Antimonium spagyriae praep. | | Argentum |

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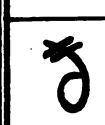
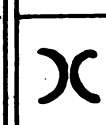
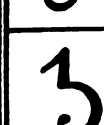
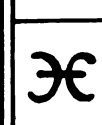
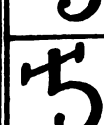
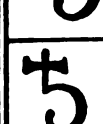
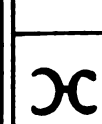
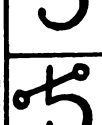
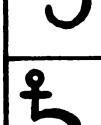
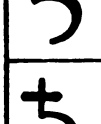
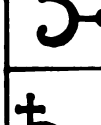
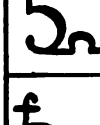
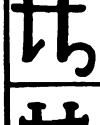
| | | | |
|---|---|---|---|
| | Destillare | | Libra |
|  | Receptaculum | | |
| | Retorta |  | Pulverisare, Realgar, Pisces, Alumen plumosum |
|  | Sal ammoniacum |  | Aurum potabile, Aestas, Faex vini, Tartarus, Sal ammoniacum, Cineres faecum vini, Compositio |
|  | Antimonium spagyriae praeparat. | | Alumen, Faex. |
|  | Saturnus, Plumbum |  | Pisces |
| | Bezoardicum Saturninum | | Balneum Mariae |
| | Calx Saturni | | Sal ammoniacum |
|  | Aqua vitae | | Lapis lazuli |
|  | Arsenicum album | | Aes, Cuprum, Aes ustum |
|  | Oleum Saturni | | Aestas |
|  | Oleum Saturni | | Antimonium spagyriae praep. |
|  | Oleum Saturni | | Arsenicum rubrum |
| | Oleum Saturni | | Plumbum |
|  | Oleum Saturni | | Amalgama |

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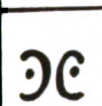
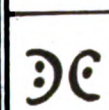
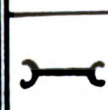
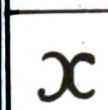
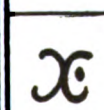
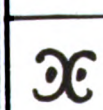
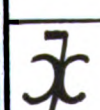
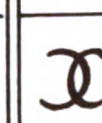
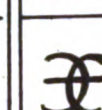
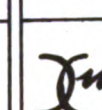
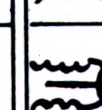
# TAFEL 36

| | |
|---|---|
| | Amalgama |
| | Sal ammoniacum |
| | Alumen plumosum |
| | Sal ammoniacum |
|  | Acetum destillatum |
|  | Oleum argenti |
|  | Sal ammoniacum |
|  | Argentum vivum, Realgar, Pulvis, Mercurius vivus (siehe auch bei X) |
| | Argentum musicum, Salammoniacum, Pisces, Alumen plumosum, Extractum |
| | Extractum Lunae |
|  | Capella |
|  | Capella, Acetum, Acetum dest. |
| | Acetum dest. |
|  | Mel |
| | Sal ammoniacum |

| | |
|---|---|
| | Crocus |
| | Cornu cervi ustum |
|  | Alumen plumosum |
| | Alumen plumosum |
|  | Fimus equinus |
|  | Libra |
| | Libra semis |
| | Lixivium |
| | Lixivium |
| | Lixivium |
|  | Lutatio |
| | Sal ammoniacum |
| | Viride aeris |
| | Aries |
| | Borax |

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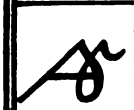
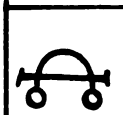
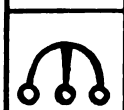
# TAFEL 37

| | |
|---|---|
| | Argentum vivum |
| | Albumen, Lixivium, Sal gemmae |
| | Marcasita |
|  | Cobaltum |
| | |
| | Philosophi |
| | Sublimare |
| | Nox |
| | Hiems |
| | Hiems |
| | Sal alcali |
|  | Sal alcali |
| | Destillare |
|  | Carbo |
| | Destillare |

| | |
|---|---|
| | Destillare |
| | Destillare |
| | Tutia |
| | Argentum |
| | Amalgama |
| | Mercurius Lunae |
| | Spiritus Argenti |
| | Ferrum |
| | Antimonium spagyr. praep. |
| | Antimonium spagyr. praep. |
| | Antimonium spagyr. praep. |
| | Lapis silex ustus |
| | Jupiter |
| | |
| | |

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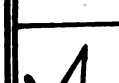
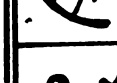
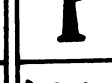
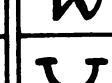
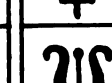
# TAFEL 38

| | |
|---|---|
| | Bolus communis |
| | Aurum, Philosophus |
| | Cucurbita |
| | Calx metallorum |
|  | Lignum |
| | Autumnus |
| | Alumen |
|  | Calx ovorum putaminum |
| | Calx |
| | Crucibulus |
| | Sal petrae, Aphronitrum, Flos parietis, Faex nitri, Nitrum Graecorum, Nitrum stolidum. |
| | Acetum |
| | Retorta |
| | Vitriolum Romanum |
| | Marcasita |
| | Sal commune |
| | Calx |
| | Lapides |
| | Sulfur |
| | Cerussa |
|  | Antimonium, Calx viva, Argentum vivum, Cuprum, Color roseus. |
| | Antimonium, Color roseus |
|  | Arsenicum album |
| | Antimonium spagyr. praep., Argentum vivum |
| | Argentum vivum |
| | Calx |
| | Amalgama |
|  | Filtrare |
| | Aqua Mercurii |
| | Filtrare |

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# TAFEL 39

| | | | |
|---|---|---|---|
| | Figere, fixare | | Putrefactio |
| | Tutia | | Putrefactio |
| | Tutia | | Putrefactio |
| | Fumus | | siehe bei |
| | Mercurius vivus | | |
| | Calx (Metallorum) | | Decoctio, Jupiter, Granum |
| | Aq. vitae | | Jupiter, Stannum |
| | Caput mortuum | | Hora |
| | Acetum dest. | | Acetum dest. |
| | Calx viva, Alumen | | Hora |
| | Antimonium spagyr. praep., Argentum vivum | | Lapis calaminaris |
| | Figere, fixare | | Cera virginea |
| | Figere, fixare | | Aq. Mercurii |
| | Lixivium calcis vivae, Lix calcis plena (Aq. calcaria) | | Aq. Mercurii |
| | Calx viva | | Calx viva, Coculus alb. Minium |

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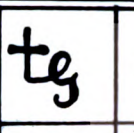
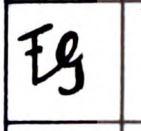
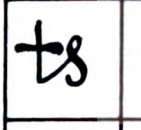
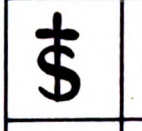
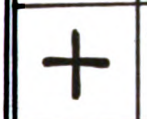
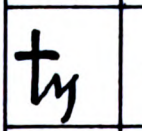
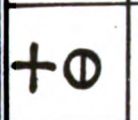
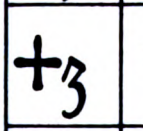
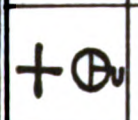
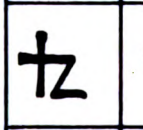
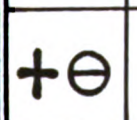
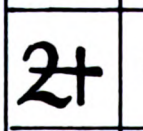
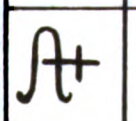
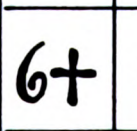
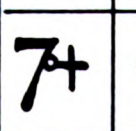
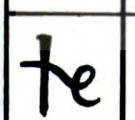
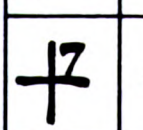
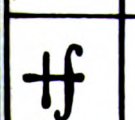
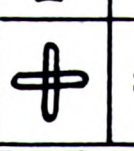
# TAFEL 40

| | | | |
|---|---|---|---|
| | Coculus rubeus |  | Pars |
| | Libra, Calx viva, Sal ammoniacum |  | Pars |
| | Coculus rubeus |  | Pars cum parte |
| | |  | Ferrum |
|  | Acidum, Acetum, destillare, Atramentum, Vitriolum, Sulfur rubr., Crucibulum, Borax, Vinum, Sal alcali, Mercurius vivus. | | Plumbum |
| | Sulfur |  | Plumbum |
|  | Acid. nitricum (auch von Bergman verwendet) |  | Plumbum |
|  | Acid. vitrioli |  | Sal gemmae |
|  | Acid. salis | | Lapis calaminaris |
| | Acid. tartari |  | Ferrugo |
|  | Mercurius |  | Urina |
| | Spiritus vini |  | Spiritus vini |
|  | Volatile |  | Sulfur |
| | Limatura ferri | | Cerussa, Fuligo, Tigillum, destillare |
|  | Acid. formicarum |  | Sal gemmae |

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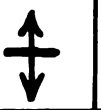
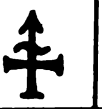
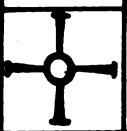
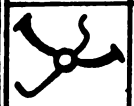
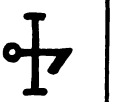
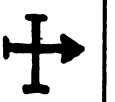
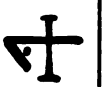
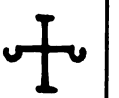
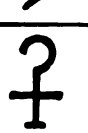
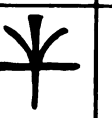
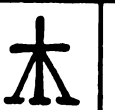
# TAFEL 41

| | | | |
|---|---|---|---|
| | Lapides | | Putrefactio |
| | Cera citrina |  | Ignis lentus |
| | Cera |  | Mars |
|  | Lapis haematites, Oleum arboris | | Putrefactio |
| | Atramentum | | Cera citrina |
|  | Vitriolum, Atramentum | | Cera citrina |
| | Caper |  | Magnesia |
| | Obulus unus | | Cuprum |
| | Sulfur |  | Cinnabaris |
| | Stannum, Jupiter | | Fixare, figere |
| | Quinta essentia |  | Cera |
| | Argentum vivum |  | Alumen |
|  | Tutia |  | Mercurius vivus |
| | Ferrum, Arcitenus, Sulfur, Arsenic. rubr., Ol. tartari, Crocus martis | | Viride aeris |
| | Ferrum, Sulfur |  | Viride aeris |

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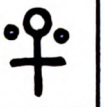
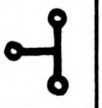
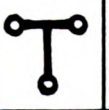
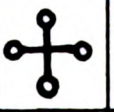
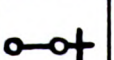
# TAFEL 42

| | | | |
|---|---|---|---|
| | Borax | | Acetum destillatum |
| | Sal ammoniacum | | Acetum destillatum |
| | Sagittarius | | Acid. arsenici (bei Scheele), Lithargyrum argenteum |
| | Sulfur | | Atramentum, Atrament. alb. |
| | Sulfur |  | Auripigmentum |
| | Sal alcali | | Argentum vivum |
| | Tigillum |  | Atramentum album |
| | Sulfur |  | Sulfur |
| | Atramentum |  | Arsenicum rubr., Atramentum, Mercurius vivus, Atrament. alb., Calx viva, Ferrum |
| | Sal gemmae | | Cera citrina |
| | Auripigmentum, Acetum | | Aurum, Sol |
| | Acet. dest. |  | Tutia |
| | Acet. dest. | | Eisenkupfer |
| | Acetum destillatum (Esprit de vinaigre bei Geoffroy) | | Sal commune, Aes dest. |
| | Acetum destillatum | | Lapis haematites |

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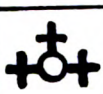
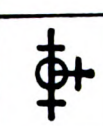
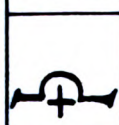
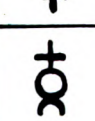
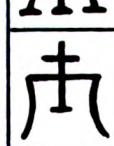
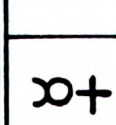
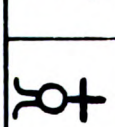
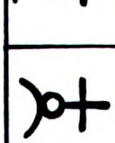
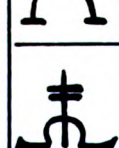
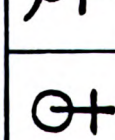
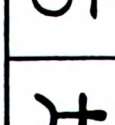
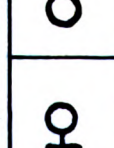
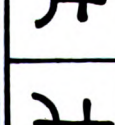
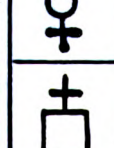
# TAFEL 43

| | | | |
|---|---|---|---|
| | Lapis calaminaris | | Argumentatio, Argumentum |
| | Lapis haematites | | Tutia |
| | Mercurius | | Tutia |
| | Venereum martis | | Tutia |
|  | Lapis magnes, Lapis nauticus | | Alumen |
|  | Minera mercurii |  | Tinctura, Turpethum |
| | Sal commune | | Tutia |
|  | Mercurius vivus | | Tutia |
| | Antimonii vitrum |  | Alumen ustum |
|  | Argentum vivum | | Acetum |
|  | Spiritus vini | | Amalgama |
|  | Argentum vivum |  | Tutia |
|  | Argentum vivum | | Siehe bei  |
|  | Argentum vivum |  | Siehe bei  |
|  | Lithargyrum, Litharg. Argenteum |  | Siehe bei |

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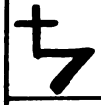
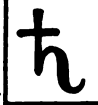
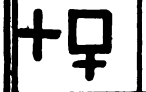
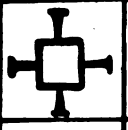
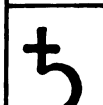
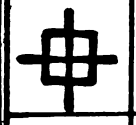
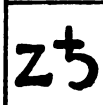
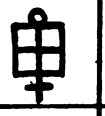
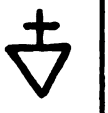
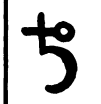
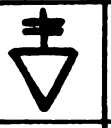
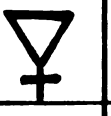
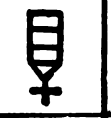
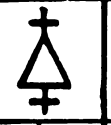
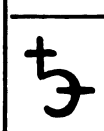
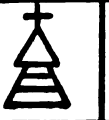
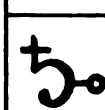
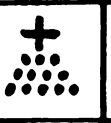
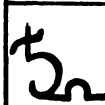
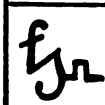
# TAFEL 44

| | | | |
|---|---|---|---|
| | Siehe bei | | Tartarus |
| | Sal commune |  | Cerussa |
| | Aqua vitae |  | Arsenicum sublimatum |
|  | Acidum tartari | | Plumbum, Saturnus |
|  | Atramentum, Atramentum alb. |  | **Plumbum, Saturnus** |
|  | Atramentum alb. |  | Sal Saturni |
|  | Alumen | | Bezoardicum saturninum |
|  | Aqua fortis |  | Lithargyrum argenteum |
|  | Aqua fortis | | Lithargyrum argenteum |
|  | Mercurius vivus | | Arsenicum album |
|  | Sal commune | | Arsenicum album |
|  | Spiritus sulfuris |  | Calx ovorum, Calx Saturni |
|  | Sal commune |  | Ol. Saturni |
|  | Arena |  | Ol. Saturni |
| | **Haematites** |  | Ol. Saturni |

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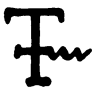
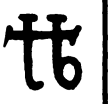
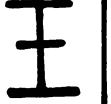
| | | | |
|---|---|---|---|
| | Limatura Saturni | | Caput mortuum, Jupiter, Stannum |
| | Ol. Saturni |  | Mercurius sublimatus |
|  | **Libra** | | Tutia |
| | Pulvis | | Vitriolum, Atramentum |
| | Sal alcali | | Acetum dest. |
| | Lana illota | | Plumbum |
| | Jupiter, Caput mortuum | | Plumbum |
| | Plumbum | | Calx metallorum |
|  | Tartarus, Lapis Tutiae | | Calx metallorum |
| | Ol. tartari Sennerti, Alumen plumosum | | **Cerussa**, Mercurius vivus |
| | Tutia | | Argentum vivum, Cerussa |
| | Oleum tartari Sennerti | | Essentia |
| | Antimonium, Ol. tartari Sennerti | | Essentia |
| | Antimonium | | Calx viva |
| | Antimonium | | Sal ammoniacum |

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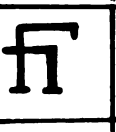
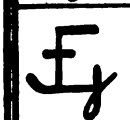
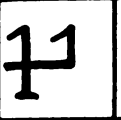
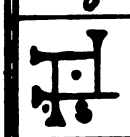
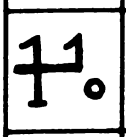
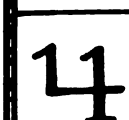
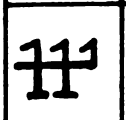
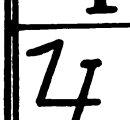
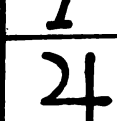
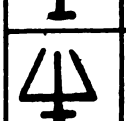
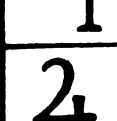
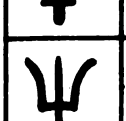
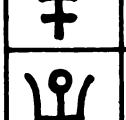
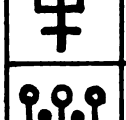
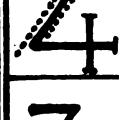
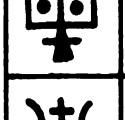
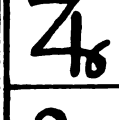
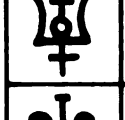
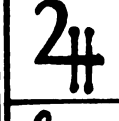
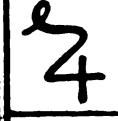
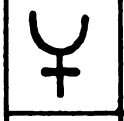
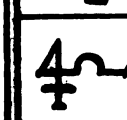
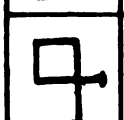
# TAFEL 46

| | | | |
|---|---|---|---|
| | Fusio |  | Antimonii regulus |
|  | Fusio |  | Tigillum |
|  | Tartarus |  | Tigillum |
|  | Jupiter |  | Tigillum |
|  | Jupiter | | Marcasita, Nitrum commune |
|  | Aqua fortis |  | Essentia |
|  | Stannum, Jupiter |  | Mercurius vivus |
| | Bezoardicum ioviale |  | Mercurius vivus |
| | Bezoardicum ioviale |  | Aqua vitae |
|  | Marcasita |  | Mercurius vivus |
|  | Ferrum |  | Vitriolum |
|  | Pars cum parte | | Siehe bei ☋ |
|  | Aqua fortis |  | Nitrum commune |
| | Quinta essentia | | Sal gemmae |
|  | Scrupulus |  | Nitrum commune |

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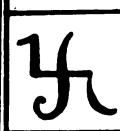
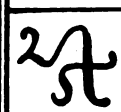
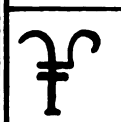
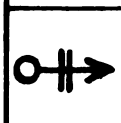
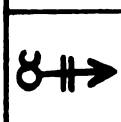
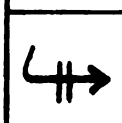
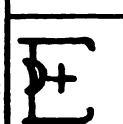
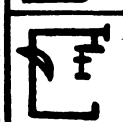
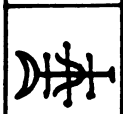
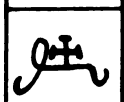
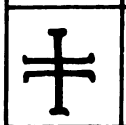
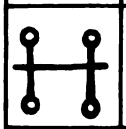
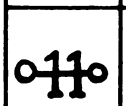
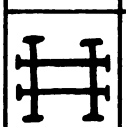
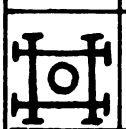
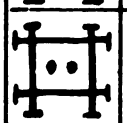
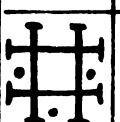
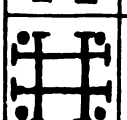
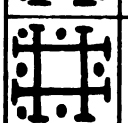
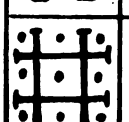
# TAFEL 47

| | |
|---|---|
| | Acetum dest. |
| | Acetum dest. |
| | Crocus martis |
| | Aqua vitae |
|  | Lapis lazuli |
| | Sal ammoniacum |
|  | Sal commune |
| | Tartarus |
| | Sal ammoniacum |
|  | Arsenicum citrinum |
|  | Viride aeris |
|  | Viride aeris |
|  | Ferrum |
|  | Calcinatio Argenti |
|  | Calcinatio Argenti |

| | |
|---|---|
| | Calcinatio Argenti |
|  | Calcinatio Argenti |
|  | Cineres Plumbi |
| | Receptaculum |
| | |
|  | Cerussa |
|  | Antimonium spagyr. praep. |
|  | Cerussa |
|  | Aer, Aerugo, Plumbum, Aurichalcum, Farina laterum, Later cribrati, Aes dest. |
|  | Urina |
|  | Marcasita aurea (Zincum) |
|  | Acetum |
|  | Acetum |
|  | Spiritus vini |
|  | Acetum dest. |

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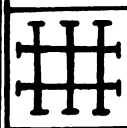
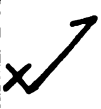
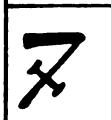
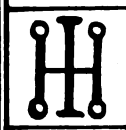
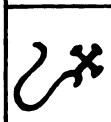
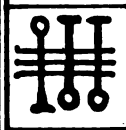
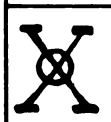
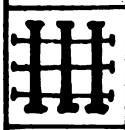
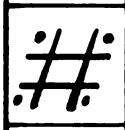
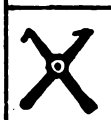
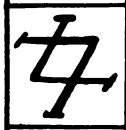
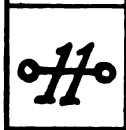
# TAFEL 48

| | | | |
|---|---|---|---|
| | Antimonium, Amalgama | | Talcum, Sulfur rubr., Crucibulum, Sal ammoniacum, siehe auch bei X. |
| | Marcasita aurea | | Phlegma |
| | Sal urinae | | Ferrum |
| | Cerussa | | Ferrum |
|  | Arsenicum alb. |  | Tigillum |
| | Jupiter |  | Stannum, Jupiter |
|  | Elementum, Principium corporum |  | Autumnus |
|  | Aqua fortis |  | Tutia, siehe auch |
|  | Amalgama, Aqua fortis | | Auri calx |
|  | Acetum dest. |  | Urina |
| | Amalgama | | Calcinatio Auri |
|  | Plumbum | | Tutia |
|  | Cerussa | | Regulus stellatus |
| | | | Sal ammoniacum |
| | | | Sal ammoniacum |

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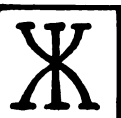
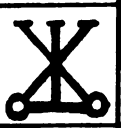
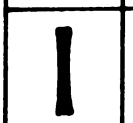
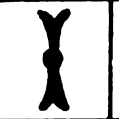
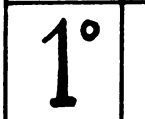
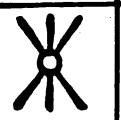
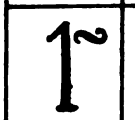
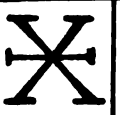
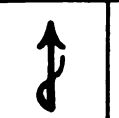
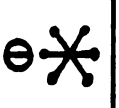
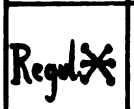
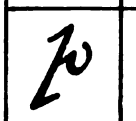
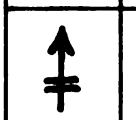
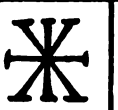
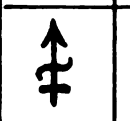
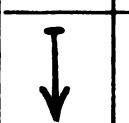
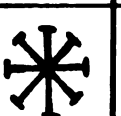
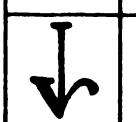
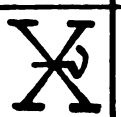
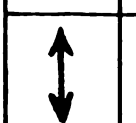
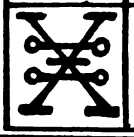
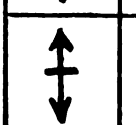
# TAFEL 49

| | | | |
|---|---|---|---|
|  | Sal ammoniacum | | Dies et nox |
|  | Auripigmentum |  | Mercurius subl. |
| | Sal ammoniacum |  | Mercurius subl. |
| | Sal ammoniacum |  | Caper |
|  | Sextilis |  | Hora |
|  | Sal ammoniacum | | Caper |
| | Acet. dest., Sextilis |  | Ferrum |
|  | Sal ammoniacum | | Sulfur |
|  | Regulus stellatus |  | Alumen |
| | Sextilis |  | Ferrum, Chalybs, Sulfur |
|  | Aestas, Arsenic. rub., Arsenic. alb., Sal ammoniacum |  | Ferrum |
| | Spiritus |  | Calx, sublimare |
|  | Aestas, Arsenicum album, Sal ammoniacum |  | Sublimare |
|  | Aestas |  | Carbones |
|  | Venus |  | Ignis lentus |

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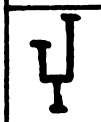
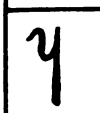
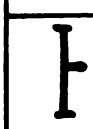
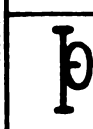
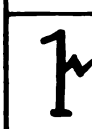
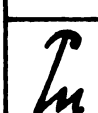
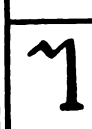
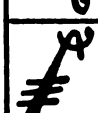
# TAFEL 50

| | | | |
|---|---|---|---|
| | Cinnabaris | | Color roseus |
| | Quinta essentia |  | Color roseus |
| | Quinta essentia | | Arsenicum citrinum |
| | Quinta essentia |  | Vitriolum |
| | Quinta essentia | | Borax |
| | Crocus, Sal communis | | Lapis calaminaris |
| | Amalgama | | Cuprum |
| | Sal alcali, Aq. insipida | | Destillare |
|  | Phlegma | | Borax |
|  | Arsenicum album | | Vitriolum Romanum |
|  | Hora | | Cerussa |
| | Lapis lazuli | | Cerussa |
| | Fluere |  | Cerussa |
|  | Atramentum alb., Vitriolum | | Cerussa |
| | Fluere |  | Borax |

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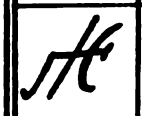
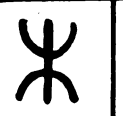
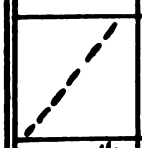
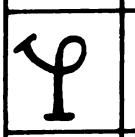
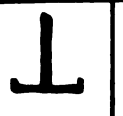
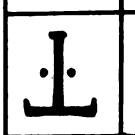
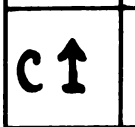
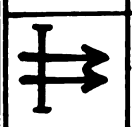
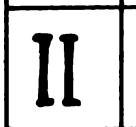
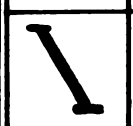
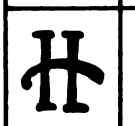
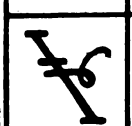
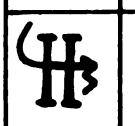
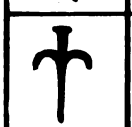
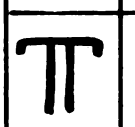
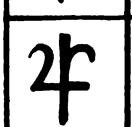
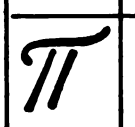
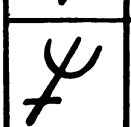
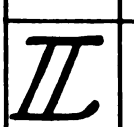
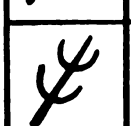
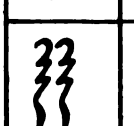
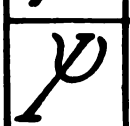
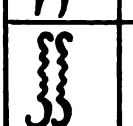
# TAFEL 51

| | | | |
|---|---|---|---|
| | Pulverisare | | Siehe bei ☋ |
|  | Limatura ferri |  | Siehe bei ☊ |
|  | Lapis haematites |  | Sulfur |
| | Alumen plumeum |  | Stratum super stratum |
| | Alumen plumeum |  | Sal gemmae |
| | Alumen plumeum |  | Crocus martis |
|  | Vitriolum Romanum |  | Gemini |
|  | Aer |  | Pulverisare |
|  | Ebullitio |  | Ferrum |
| | Viride aeris | | Hora |
|  | Borax |  | Calamus |
|  | Argentum vivum |  | Vitriolum Romanum |
|  | Alumen plumeum |  | Minium |
|  | Amalgama |  | Vitrum Antimonii |
|  | Caput mortuum |  | Ignis |

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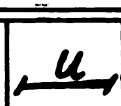
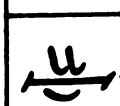
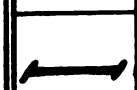
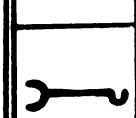
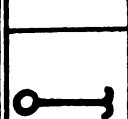
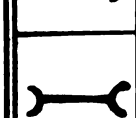
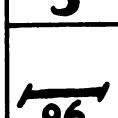
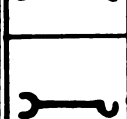
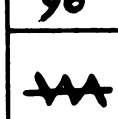
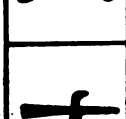
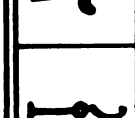
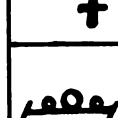
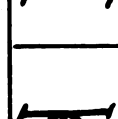
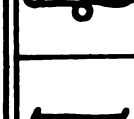
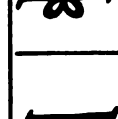
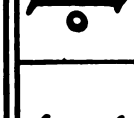
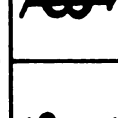
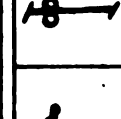
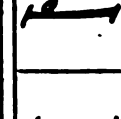
# TAFEL 52

| | | | |
|---|---|---|---|
| | Sextarius |  | Tartarus |
| | |  | Alumen plumeum |
|  | Aer | | Alumen |
| | Marcasita, Sagittarius | | Alumen |
|  | Atramentum, Cinis | | Antimonium |
|  | Fluere | | Alembicus |
|  | Sal ammoniacum |  | Cineres Plumbi |
|  | Vitriolum, Atramentum |  | Minium |
|  | Ochra | | Fluere |
|  | Fluere |  | Nitrum commune |
| | Cineres Plumbi |  | Nox |
|  | Destillare |  | Nox |
|  | Oleum commune |  | Auripigmentum, Annus |
| | Cuprum, Venus |  | Sal gemmae |
| | Ferrum |  | Cineres Plumbi |

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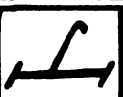
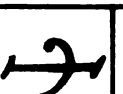
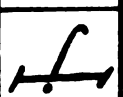
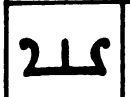
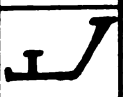
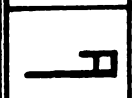
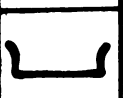
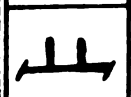
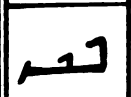
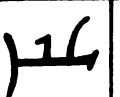
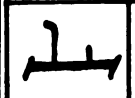
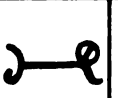
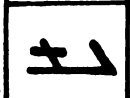
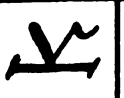
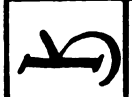
# TAFEL 53

| | | | |
|---|---|---|---|
|  | Ferrum |  | Minium |
|  | Ferrum |  | Borax, Argent. vivum |
|  | Soda | | Tartarus, Borax |
|  | Marcasita aurea | | Tartarus, Borax |
|  | Marcasita, Bismutum | | Tartarus |
|  | Marcasita | | Tartarus |
|  | Lazura, Lapis lazuli |  | Tartarus |
|  | Mensis |  | Borax |
|  | Putrificare | | Tartarus |
| | Tartarus | | Minium |
| | Mensis | | Tartarus |
|  | Mensis | | Tartarus |
| | Regulus | | Dies |
|  | Mensis | | Extrahere |
| | Mercurius vivus | | Assare |

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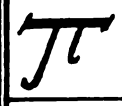
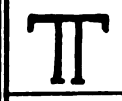
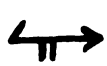
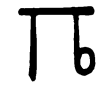
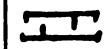
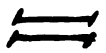
# TAFEL 54

| | | | |
|---|---|---|---|
|  | Alumen | | Digerere |
|  | Calamus | | Calcinare |
|  | Ferrum | | Animalia |
| | Fimus equinus | | Marcasita |
| | Calamus | | Fimus equinus |
| | Fimus equinus | | Gemini |
|  | Ol. commune | | Gemini |
| | Sal commune | | Gemini |
| | Libra | | Hora |
| | Mercurius praec. alb. |  | Reverberium |
| | Libra | | Lamina |
|  | Oboli duo | | Calcinare |
| | Sublimare, Libra, Wage | | Arsenicum sublimatum |
| | Praecipitare, destillare, Piger Henricus | | Aurum |
| | Antimonii vitrum | | Aurum |

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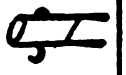
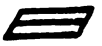
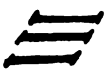
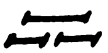
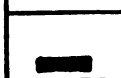
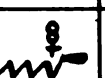
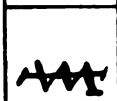
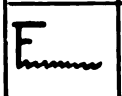
# TAFEL 55

| | |
|---|---|
| | Lapis calaminaris |
|  | Lapis calaminaris |
| | Destillare |
| | Plumbum |
| | Lamina |
|  | Lamina |
| | Sal commune |
| | Ferrum |
|  | Plumbum |
| | Bismutum, Marcasita |
|  | Aqua vitae |
| | Aqua vitae |
|  | Spiritus vini |
| | Plumbum |
| | Plumbum |
| | Nitrum commune |
| | Camphora, liquefacere |
| | Aq. communis |
| | Aquarius |
| | Camphora, liquefacere |
| | Aq. Regis |
| | Vitriolum Romanum |
| | Aq. fortis |
| | Therebinthina |
| | Solutio |
| | Aq. Mercurii |
| | Aq. amphorae |
|  | Arsenicum sublimatum |
|  | Minium |
|  | Minium |

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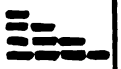
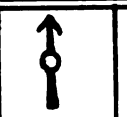
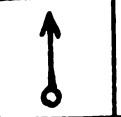
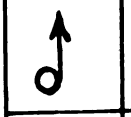
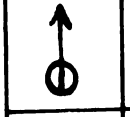
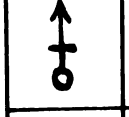
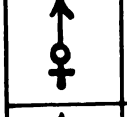
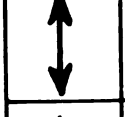
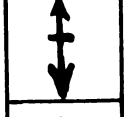
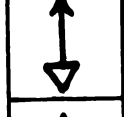
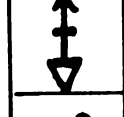
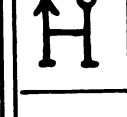
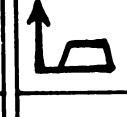
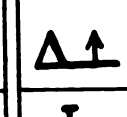
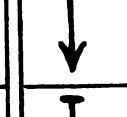
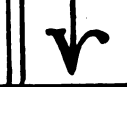
# TAFEL 56

| | |
|---|---|
| | Liquefacere |
|  | Arena |
| | Arena |
| | Nitrum commune |
| | Camphora |
| | Camphora |
| | Camphora |
| | |
| | Crocus martis |
| | Ferrum |
| | Sulfur, Ferrum, Crocus martis, Arcitenus, Arsenicum rubr., Ol. tartari, Sagittarius. |
| | Sulfur, Ferrum |
| | Mars |
| | Corium (= Haut, Leder, Schale. Rinde) |
| | Sal alcali |

| | |
|---|---|
|  | Mars |
|  | Ferrum, Chalybs |
|  | Ferrum |
|  | Ferrum |
|  | Vitriolum, Atramentum |
|  | Venereum martis |
|  | Carbones |
|  | Ignis lentus |
|  | Crocus martis |
|  | Crocus martis |
|  | Viride aeris |
|  | Tartarus |
|  | Tartarus |
|  | Sublimare, Aqua, Calx metallorum |
|  | Sublimare |

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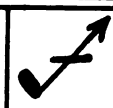
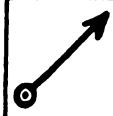
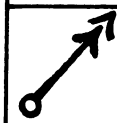
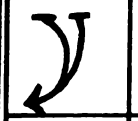
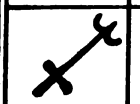
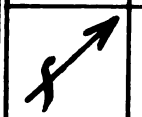
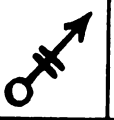
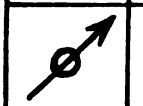
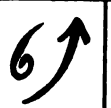
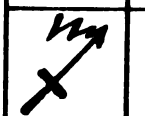
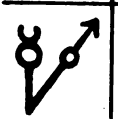
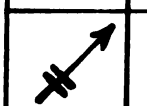
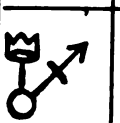
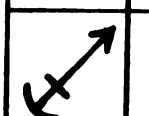
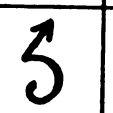
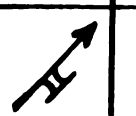
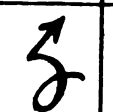
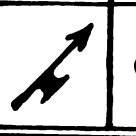
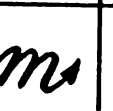
# TAFEL 57

| | | | |
|---|---|---|---|
| | Aqua |  | Corium (= Haut, Leder, Schale Rinde) |
| | Vitriolum | | **Ferrum, Chalybs, Mars,** Vitrum, Crocus martis |
| | Vitriolum |  | Limatura ferri, Crocus martis |
| | Ferrum |  | Regulus ferri |
|  | Ferrum | | Ferrum |
| | Sagittarius | | Crocus martis, Mars |
|  | Phlegma | | Limatura ferri |
|  | Ferrum |  | Chalybs, Ferrum |
|  | Talcum | | Mars |
| | Chalybs, Ferrum |  | Sal gemmae |
|  | Crocus martis |  | Mercurius martis |
|  | Sagittarius |  | Limatura ferri |
|  | Alumen plumosum |  | Chalybs, Ferrum, Mars |
|  | Crocus martis |  | Chalybs, Ferrum, Mars |
|  | Crocus martis |  | Scorpio |

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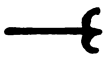
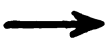
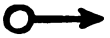
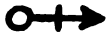
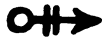
# TAFEL 58

| | | | |
|---|---|---|---|
| | Purificatio | | Putrefactio |
|  | Ochra | | Ferrum |
|  | Marcasita | | Antimonium spagyr. praep. |
|  | Chalybs, Ferrum | | Cinnabaris |
| | Limatura ferri | | Putrefactio |
|  | Chalybs, Ferrum | | Putrefactio |
|  | Viride aeris | | Putrefactio |
| | Viride aeris | | Vitriol. alb. |
| | Limatura chalybis | | Alumen ustum |
| | Ferrum | | Alumen |
|  | Ferrum | | |
|  | Crocus martis | | |
| | Chalybs, Ferrum | | |
| | Eisenkupfer | | |
| | Limatura chalybis, Limatura ferri | | |

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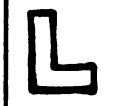
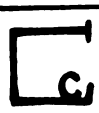
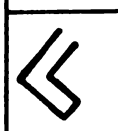
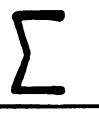
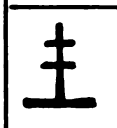
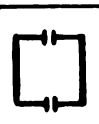
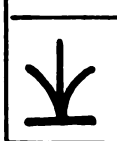
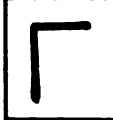
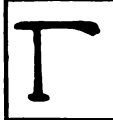
# TAFEL 59

| | | | |
|---|---|---|---|
| | Ferrum, Cuprum | | Ochra |
| | Borax | | Ochra |
| | Dies et nox, dies, nox |  | Aurichalcum |
| | Nox | | Aurichalcum |
|  | Calcinare |  | Aurichalcum |
| | Dies | | Alembicus |
| | Terra foliata tartari | | Alumen |
| | Aqua | | Alumen plumosum |
| | Calcinare | | Stratum super stratum |
|  | Saccharum | | Sal gemmae |
| | Septimana |  | Sal ammoniacum |
|  | Atramentum, Vitriolum album, Atrament. alb. |  | Mercurius |
| | Septimanae duae |  | Nitrum, Unica |
| | Septimanae tres |  | Cuprum |
| | Aurichalcum | | Sal alcali |

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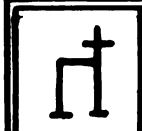
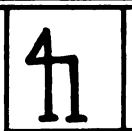
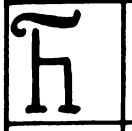
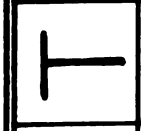
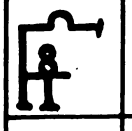
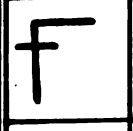
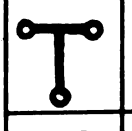
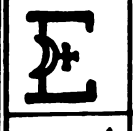
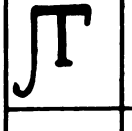
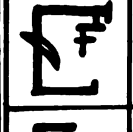
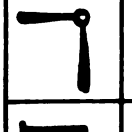
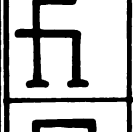
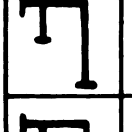
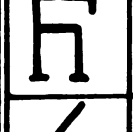
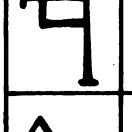
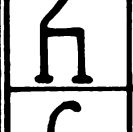
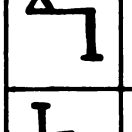
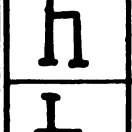
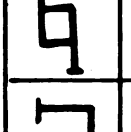
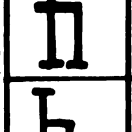
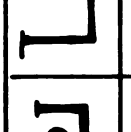
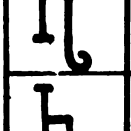
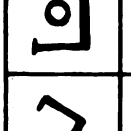
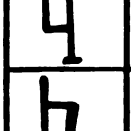
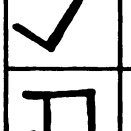
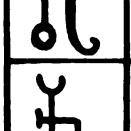
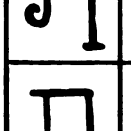
# TAFEL 60

| | | | |
|---|---|---|---|
|  | Acetum, Acetum destillatum |  | Talcum |
| | Acettm, Acetum destillatum |  | Calx metallorum |
|  | Phlegma salis |  | Arsenicum sublimatum |
|  | Scrupulus |  | Sulfur |
|  | Calcinatio argenti |  | Acetum vini rubri |
|  | Calcinatio argenti |  | Arsenicum alb. |
|  | Antimonii regulus |  | Aer |
|  | Antimonii regulus |  | Alumen catinum, Sal alcali |
|  | Antimonii regulus |  | Tartarus |
|  | Antimonii regulus |  | Plumbum |
|  | Antimonii regulus |  | Dies, dies et nox |
|  | Lapis lazuli |  | Cinnabaris |
|  | Plumbum |  | Aqua amphora |
|  | Plumbum |  | Alumen |
| | Borax | | Alumen |

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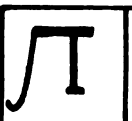
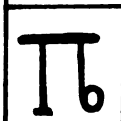
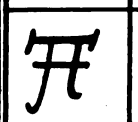
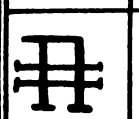
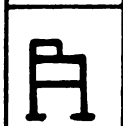
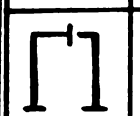
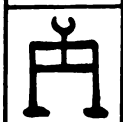
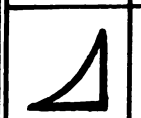
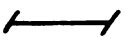
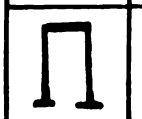
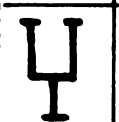
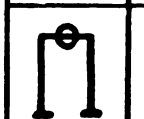
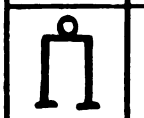
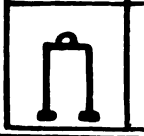
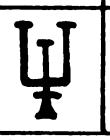
# TAFEL 61

| | | | |
|---|---|---|---|
|  | Alumen plumosum | | Sal alcali |
| | Acetum vini |  | Oleum commune |
|  | Sal commune | | Magnesia |
|  | Marcasita aurea |  | Alumen plumosum |
|  | Hora |  | Alumen plumosum |
| | Marcasita aurea | | Alumen |
|  | Coelum colore inflammatum | | Permiscere |
| | Siehe bei  | | Tartarus |
|  | Nitrum commune | | Hora |
| | Hiems | | Alcali, Jupiter, Stannum |
| | Crucibulum | | Aq. fortis, Terra Lemnia |
| | Sal ammoniacum |  | Sal alcali, Alumen, Siehe auch |
|  | Argentum | | Sal alcali |
|  | Oleum commune | | Sal alcali |
|  | Sal alcali |  | Sal alcali |

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# TAFEL 62

| | | | |
|---|---|---|---|
| | Auripigmentum, Ignis, Terra, Aurum, Tetragonus, Quadratus, Aq. fortis, Sapo, Sal commune, Antimonium spagyriae praep. | | Fornax |
| | Later | | Fornax |
| | Tartarus | | Fornax portabilis |
| | Aurum | | Tartarus, Argentum vivum, Mercurius |
| | Tartarus | | Ferrum |
| | Tartarus | | Destillare per arenam |
| | Aurum | | Sal gemmae |
| | Urina, Mel | | Jupiter |
| | Auricalx | | Plumbum, Saturnus, Venus, Cuprum |
| | Schmelzofen | | Mercurius sublimatus |
| | Aurichalcum | | Fliessendes Feuer, schmelzen |
| | Fornax | | Mercurius sublimatus |
| | Luna | | Terra Lemnia |
| | Ferrum, Mars | | Minium |
| | Materia prima | | Minium |

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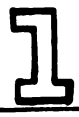
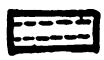
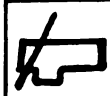
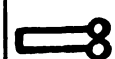
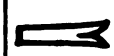
# TAFEL 63

| | | | |
|---|---|---|---|
| | Lapis haematites | | Later |
| | Lapis calaminaris | | Later cribrati, Farina laterum |
|  | Alumen | | Farina laterum |
| | Fuligo | | Calx |
| | Fuligo |  | Calx |
| | Arsenicum sublimatum |  | Sol |
| | Antimonium | | Sol |
| | | | Sol |
| | Plumbum | | Sal urinae |
| | Arsenicum album |  | Sol |
| | Arsenicum album |  | Borax |
| | Arsenicum album | | Borax |
| | Windofen | | Ferrum |
| | Arsenicum album | | Marcasita |
| | Later, Farina laterum | | Alumen |

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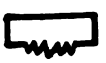
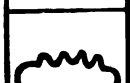
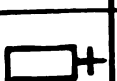
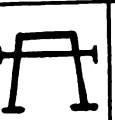
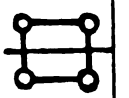
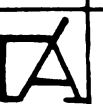
# TAFEL 64

| | |
|---|---|
| | Ovum philosophorum |
| | Borax |
| | Borax |
| | Mercurius vivus |
| | Lamina |
| | Aerugo, Fel vitri |
| | Sal gemmae |
| | Lamina |
| | Fornax, Windofen |
| | Aer, Aerugo, Aes dest. |
| | Lateres |
|  | Solutio |
|  | Lapis sabulosus |
|  | Sal commune |
| | Arsenicum sublimatum |
| | Testa |
|  | Antimonium |
| | Antimonium |
| | Aer |
| | Aqua fortis |
| | Mercurius vivus |
|  | Antimonium |
| | Aqua |
| | Later |
| | Aqua fortis |
| | Later |
| | Sal gemmae, Mensis |
| | Mensis |
| | Mensis |
|  | Sal alcali |

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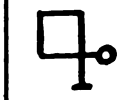
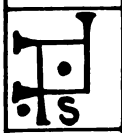
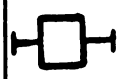
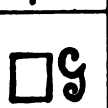
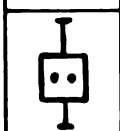
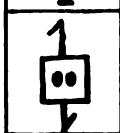
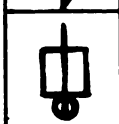
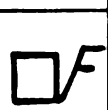
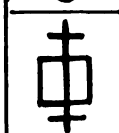
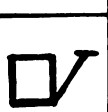
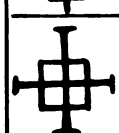
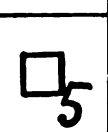
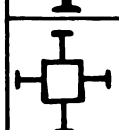
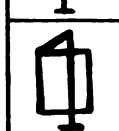
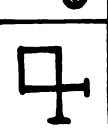
# TAFEL 65

| | | | |
|---|---|---|---|
| | Sal alcali |  | Sulfur verum |
| | Sal vini essentiale | | Nitrum commune |
| | Terra foliata tartari |  | Tartarus rubeus |
| | Mel | | Saturnus, Plumbum |
| | Terra foliata tartari |  | Aqua vitae |
| | Terra foliata tartari | | Sal commune, Sal gemmae |
| | Tartarus emeticus | | Aqua vitae |
|  | Sal gemmae |  | Resina, Gummi |
| | Sal gemmae |  | Radix |
| | Sal gemmae |  | Vitrum Romanum |
|  | Sal vini essentiale |  | Sal tartari |
|  | Fel Vitri |  | Atramentum |
|  | Mars |  | Atramentum |
| | Filtrare |  | Mercurius vivus |
|  | Sal gemmae | | |

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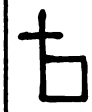
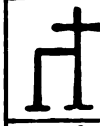
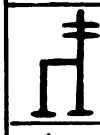
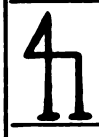
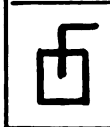
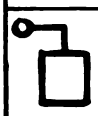
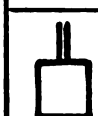
# TAFEL 66

| | | | |
|---|---|---|---|
| | Aurum foliatum | | Dies |
| | Argentum foliatum | | Sal gemmae |
| | Ignis circulatorius | | Fumus |
| | Terra sigillata | | Alumen |
| | Ignis circulatorius | | Tartarus |
| | Lapis calaminaris |  | Ulcus |
| | Auripigmentum | | Dies et nox |
| | Oleum commune | | Sal colcothariu m |
| | Argentum |  | Acetum, Acetum dest. |
| | Sal alcali |  | Acetum, Acetum dest. |
| | Destillare |  | Talcum |
| | Oleum commune |  | Fumus |
| | | | Dies |
| | |  | Nox |
| | |  | Alumen |

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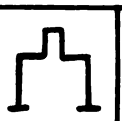
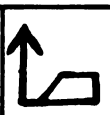
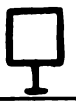
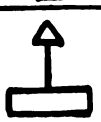
# TAFEL 67

| | | | |
|---|---|---|---|
|  | Alumen ustum, Alumen plumosum |  | Tartarus |
| | Alumen | | Borax |
| | Antimonium spagyriae praep. | | Borax |
| | Caementare, cementare | | Alembicus |
| | Sal commune | | |
| | Alumen ustum |  | Ahenum, Antimonium spagyr. praep., Lixivium, dies. |
| | Borax | | Atheneum |
| | Regulus | | Crucibulum |
| | Regulus | | Antimonii vitrum |
| | Solvatio | | Nitrum |
| | Lapis haematites | | Alumen |
| | Lapis haematites | | Sulfur |
| | Antimonium spagyr. praep. | | Sulfur |
|  | Alumen | | Alumen, Alumen catinum, Cineres clavellati. |
| | Sal commune | | Alumen catinum, Antimonium spagyr. praep., Tutia |

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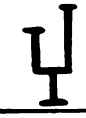
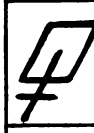
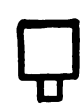
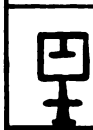
# TAFEL 68

| | | | |
|---|---|---|---|
| | Vitriolum | | Ahenum, Alumen |
| | Argentum vivum | | Nitrum commune |
| | Siehe bei ⌣ | | Marcasita |
| | Siehe bei ⌣ | | |
| | Cineres clavellati, Marcasita, Nitrum commune | | **Tartarus**, Lixivium, Lauge |
| | Cineres clavellati | | Nitrum |
|  | Color Roseus | | Tartarus |
| | Cineres clavellati |  | Sal alcali |
| | Vitriolum, Atramentum | | Alcali |
| | Mercurius | | Sal tartari essentiale |
|  | Ahenum | | Terra foliata tartari |
| | Sal alcali | | Calx metallorum |
| | Assare | | Alumen ustum |
| | Assare |  | Antimonium spagyr. praep. |
| | Sal alcali | | Sulfur |

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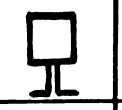
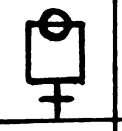
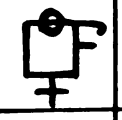
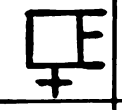
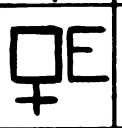
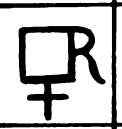
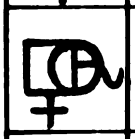
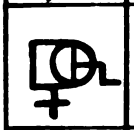
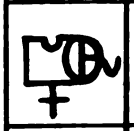
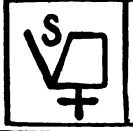
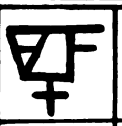
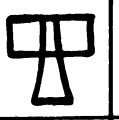
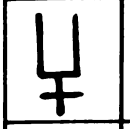
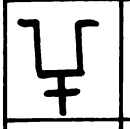
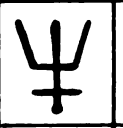
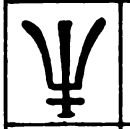
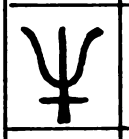
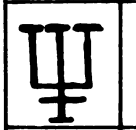
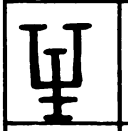
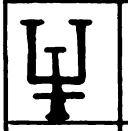
| | |
|---|---|
| | Arsenicum rubrum |
|  | Sal alcali |
| | Terra foliata tartari |
|  | **Sal tartari** |
|  | Terra foliata tartari, Sal tartari essentiale |
| | Sal tartari |
|  | Terra foliata tartari |
|  | Tartarus emeticus |
|  | Tartarus rubeus, Sulfur tartari |
| | Nitrum tartari |
|  | Tartarus vitriolatus |
|  | Sal vitrioli alcalinum |
|  | Spiritus tartari vitriolatus |
| | Spiritus tartari (acid. vinos. crudus) |
|  | Spiritus vini tartarisatus |

| | |
|---|---|
|  | **Terra foliata tartari** |
| | Terra foliata tartari |
| | Lixivium tartari |
|  | **Lapis** |
|  | Mercurius vivus |
|  | **Cineres Clavellati,** Cineres cribrati, Jupiter, Stannum |
| | Arsenicum citrinum |
|  | Sulfur |
|  | Argentum vivum |
| | Antimonium |
|  | Siehe bei |
|  | **Cineres clavellati,** Sulfur (bei Bergman vor einem Metallzeichen = Metall-Kalk) |
|  | Sal alcali |
|  | Cineres clavellati |
| | Mercurius vivus |

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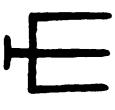
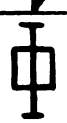
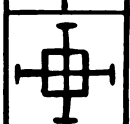
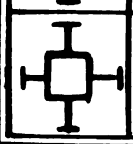
| | | | |
|---|---|---|---|
| | Cinis cribrati | | Mercurius vivus |
| | Cineres clavellati | | |
| | Humiditas | | |
| | Crocus martis | | Sapo, Aurichalcum, Antimon. spagyr. praep., Lamina cupri, Vitrum |
|  | Cinis | | Aurichalcum, Sulfur |
| | Spiritus mundi | | Antimonium spagyr. praep. |
| | Spiritus mundi | | Cucurbita, Cocca |
| | Mercurius vivus | | Cucurbita, Cocca |
|  | Vitriolum Romanum | | Matras |
| | Resina, Gummi | | Dies |
| | Radix | | Lapis haematites |
| | Vitriolum Romanum | | Argentum |
| | Sal tartari | | Flores vitrioli |
|  | Atramentum | | Lapis Haematites, Figister Mercurius |
|  | Atramentum | | Sapo |

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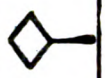
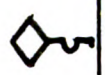
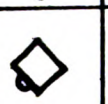
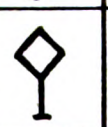
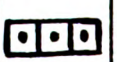
| | | | |
|---|---|---|---|
| | Alumen plumosum | | Annus |
|  | Sal gemmae | | |
| | Filtrare | | Atramentum |
|  | Filtratio | | Sal urinae |
| | Filtratio | | Sal urinae |
| | Sal alcali | | Sal urinae |
|  | Aurichalcum | | Sal urinae |
| | Tigillum | | Marcasita |
| | Aurichalcum | | Aqua nitri, Arsenicum alb. |
| | Aurichalcum | | Later cribrati |
|  | Cinis | | Arsenicum |
| | Cinis |  | Farina laterum, Later cribrati, Arsenicum |
| | Crocus veneris | | Aer, Aerugo, Aes destillatum |
| | Sulfur | | Lateres |
| | Tutia | | Lateres |

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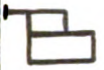
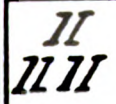
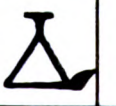
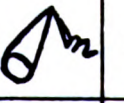
# TAFEL 72

| | | | |
|---|---|---|---|
| | Arsenicum album | | **Ignis,** Ignis lentus, Oleum tartari, Arsenicum album, Sulfur rubrum, Trigonus, Triangulus. |
| | Aqua salis nitri | | Minium |
|  | Sal commune | | Ignis lentus |
| | Fuligo | | Ignis circulatorius, ignis rotae |
| | Aqua vitae | | Ignis circulatorius, ignis rotae |
| | Dies et nox | | Ignis balnei |
| | Spiritus vini | | Ignis circulatorius |
| | Spiritus vini | | Ignis circulatorius |
|  | Spiritus vini | | Ignis circulatorius |
| | Lazura | | Aqua fortis |
| | Sulfur | | Ignis lentus |
| | |  | Ignis lentus |
| | | | Calx metallorum |
| | |  | Destillare |
| | | | Ignis reverberii |

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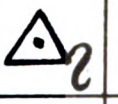
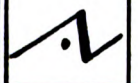
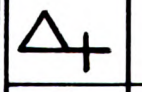
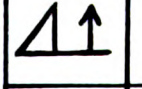
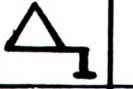
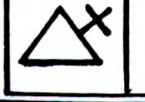
# TAFEL 73

| | | | |
|---|---|---|---|
| | Ignis lentus | | Lixivium |
| | Borax | | Aurum |
| | Borax |  | Aurum |
| | Plumbum ustum | | Oleum tartari |
| | Plumbum ustum | | Spiritus vini |
| | Sublimare | | Spiritus vini |
| | Sublimare | | Sigillum hermeticum, Aer |
|  | Volatile | | Aer |
| | Volatile | | Sigillum hermeticum, Aer |
|  | Tartarus | | Aer |
|  | Tartarus | | Terra |
|  | Tartarus | | Amalgama |
| | Tartarus | | Permixtio |
| | Lutatio | | Amalgama |
|  | Lutatio | | Amalgama |

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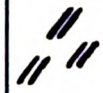
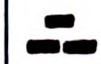
# TAFEL 74

| | | | |
|---|---|---|---|
| | Drachma | | Spiritus vini |
| | Aqua, Oleum commune |  | Spiritus vini |
| | Acetum | | Spiritus vini |
| | Ignis circulatorius, Sal alcali |  | Spiritus vini |
| | Aurum | | Coelum colore inflammatum |
| | Cucurbita, Cocca | | Arsenicum album |
| | Cucurbita, Cocca | | Aurum |
| | Lapis Magnes | | Arsenicum album |
| | Lapis Magnes | | Arsenicum album |
| | Arsenicum alb. | | Arsenicum album |
| | Sal gemmae | | Plumbum |
| | Acetum | | Arsenicum album |
| | Arsenicum rubrum | | Aurum |
| | Auripigmentum | | Borax |
| | Resina, Argentum | | Borax |

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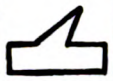
| | | | |
|---|---|---|---|
|  | Borax | | Sulfur |
| | Regulus | | Sulfur |
| | Regulus | | Sulfur nigrum, Tutia Alexandria |
| | Regulus | | Tutia |
| | Antimonii regulus | | Sulfur vivum |
| | Antimonii regulus | | Sulfur vivum |
| | Alcali | | Sulfur philosophorum |
| | Aerugo, Aer, Aes destillatum | | Sulfur Arsenici |
| | Aer, Aerugo | | Phlogiston |
| | | | Principe huileux ou soufre principe (Geoffroy) |
| | Crocus martis, Acetum dest., Flores sulfuris, Sulfur | | Spiritus Sulfuris |
| | Tutia | | Oleum Sulfuris |
| | Calcium | | Flores sulfuris |
| | Sulfur | | Arsenicum album |
| | Sulfur | | Arsenicum album |

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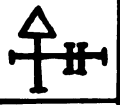
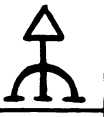
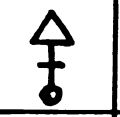
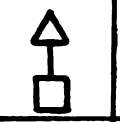
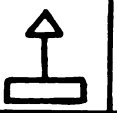
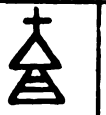
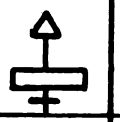
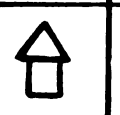
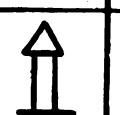
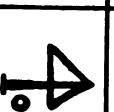
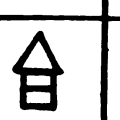
# TAFEL 76

| | | | |
|---|---|---|---|
| | Phosphorus | | Lapis haematites |
| | Crocus martis | | Borax |
| | Arsenicum rubrum | | **Borax** |
|  | Arsenicum rubrum | | Mel |
| | Arsenicum album | | Sulfur philosophorum |
| | Arsenicum album |  | Sulfur philosophorum |
|  | Ferrum, Vitriolum | | Sulfur philosophorum |
|  | Antimonium spagyriae praep. | | **Aer** |
|  | **Alumen** |  | Sal commune |
|  | Sal commune | | **Alembicus** |
| | Alumen ustum | | Ignis fortis |
|  | **Caementare,** cementare | | Putrefactio |
|  | Caementare |  | **Ferrum** |
| | Caementare | | |
|  | Sal commune | | |

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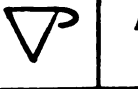
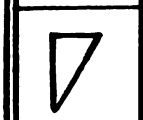
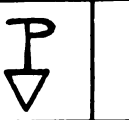
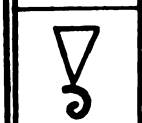
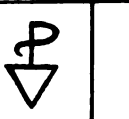
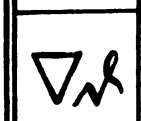
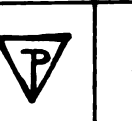
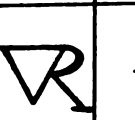
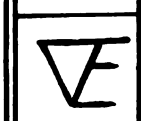
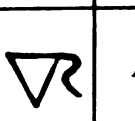
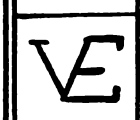
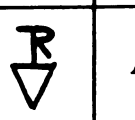
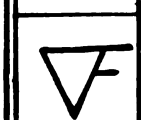
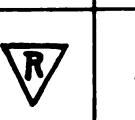
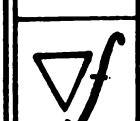
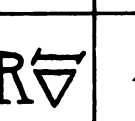
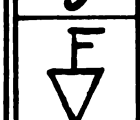
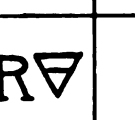
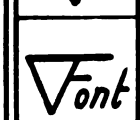
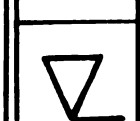
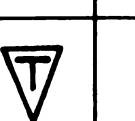
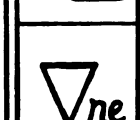
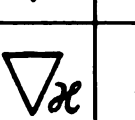
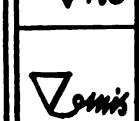
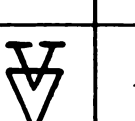
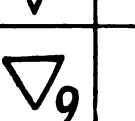
| | | | |
|---|---|---|---|
| | **Aqua,** Aqua Regis, Phlegma Aqua amphorae |  | Aqua pluvialis |
|  | Aqua insipida |  | **Aqua pluvialis** |
|  | Hora |  | Sulfur |
|  | Aqua destillata |  | **Aqua pluvialis** |
| | Acetum |  | **Aqua Regis** |
|  | Acetum |  | Aqua Regis |
|  | Vinum emeticum |  | Aqua Regis |
|  | **Aqua fortis** |  | Aqua Regis |
|  | Aqua fortis |  | Aqua pluvialis |
|  | Aqua fortis |  | Aqua pluvialis |
|  | Aqua fontana | | Aqua vitae |
|  | Vinum laxativum |  | Tumor |
|  | Balneum Mariae |  | Aqua fortis |
|  | Aqua communis |  | Aqua vitae |
| | **Aqua pluvialis** |  | Sal commune |

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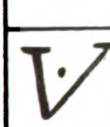
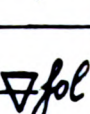
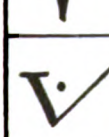
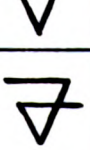
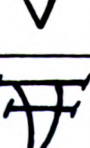
| | | | |
|---|---|---|---|
| | Hora | | Filtrare |
| | Crucibulum, Tigillum | | Aurum |
| | Crucibulum, Tigillum | | Aurum |
| | Crucibulum, Tigillum | | Aurum |
| | Aqua vitae | | Aqua ardens |
| | Aqua vitae, Sal alcali | | |
| | Sulfur | | **Terra,** Aqua pluvialis, fluere. |
| | Plumbum, Aqua | | Terra, Aqua pluvialis, fluere |
|  | Fixum | | Terra, Sulfur |
| | Aries |  | Terra foliata tartari |
|  | Fixum | | Terre absorbante (Geoffroy) |
| | Fixare | | Aqua pluvialis |
| | Balneum Mariae |  | Terra |
| | Filtrare |  | Sulfur |
| | Filtrare | | Lapis lazuli, Lazura |

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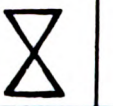
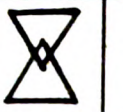
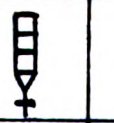
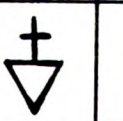
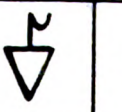
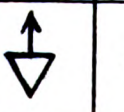
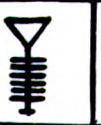
| | | | |
|---|---|---|---|
| | Aqua salia | | Terra foliata tartari |
| | Arsenicum rubrum | | **Terra foliata tartari** |
| | Aqua | | Sal gemmae |
| | Aqua | | Sal ammoniacum |
| | Auripigmentum |  | **Hora** |
| | Auripigmentum | | Acetum destillatum |
| | Terra sigillata |  | Hora |
| | **Terra sigillata** | | Aurum |
| | Argilla | | Aurum |
| | Auripigmentum, Terra | | Sulfur arsenici |
| | Destillare |  | Sal commune |
| | Crucibulum, Tigillum |  | Aqua fortis |
| | Argentum vivum |  | Crocus martis, Aqua Regis |
| | Vitriolum |  | Crocus martis, Aqua Regis |
|  | Alumen plumosum | | Crocus martis, Aqua Regis |

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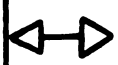
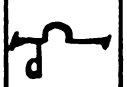
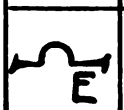
| | | | |
|---|---|---|---|
| | Aqua fortis | | **Spiritus,** sublimare, calcinare, Calx ovorum, Turpethum minerale, Acetum, Tinctura, Cuprum caldarium |
| | Crocus martis | | Esprits acides (Geoffroy) |
| | Vitriolum album | | Calcinare |
| | **Vitriolum album, Atramentum** | | Calcinare |
| | | | Annus |
| | Antimonium spagyriae praep. | | Annus |
| | Sulfur | | Calcinare |
| | Autumnus | | Oleum Saturni |
| | Antimonium spagyr. praep., Aqua vitae, Crocus martis | | **Digerere** |
| | Lapis calaminaris, Arsenicum album | | Sublimare |
|  | Ferrum, Vitriolum album | | Calx viva |
| | **Reverberatio** | | Calcinare |
| | **Elementum** |  | Lapis calaminaris |
| | Coquere | | Destillare |
| | Carbo |  | Solvere |

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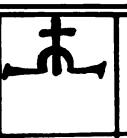
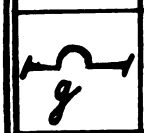
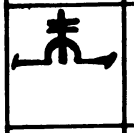
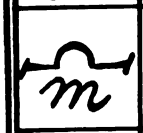
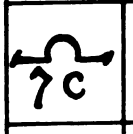
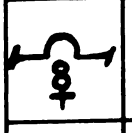
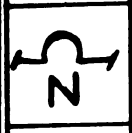
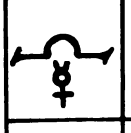
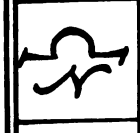
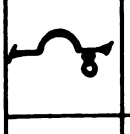
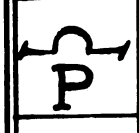
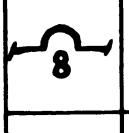
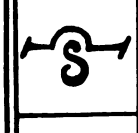
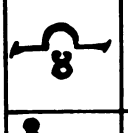
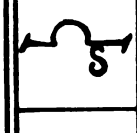
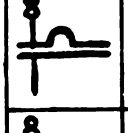
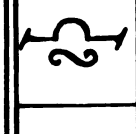
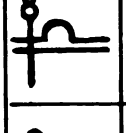
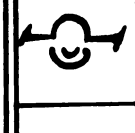
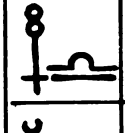
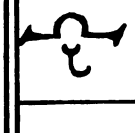
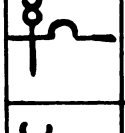
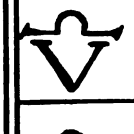
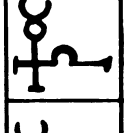
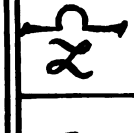
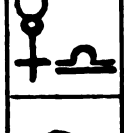
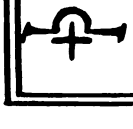
| | | | |
|---|---|---|---|
| | Vitellus |  | Tutia |
|  | Gradus ignis |  | Tutia |
|  | Tutia sublimata, Lapis calaminaris sublimatus |  | Calx viva |
| | Tutia sublimata, Lapis calaminaris sublimatus |  | Mercur. sublimat. |
|  | Lutare |  | Mercur. Saturni praecipit. |
|  | Tingere |  | Digerere |
|  | Praeparare |  | Digerere |
|  | Spiritus, Spiritus per ascensum |  | Digerere |
|  | Spiritus, Spiritus per ascensum |  | Minium |
|  | Aqua gradaria |  | Mercurius sublimatus, Minium |
|  | Cerussa |  | Mercurius sublimatus, Minium |
|  | Cerussa |  | Mercurius sublimatus |
|  | Cera flava, Lutatio, Luna crescens |  | Mercurius sublimatus |
|  | Capitellum |  | Mercurius sublimatus |
|  | Tinctura, Turpethum minerale, Cuprum caldarium | | Oleum sulfuris |

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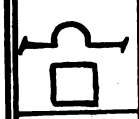
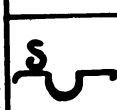
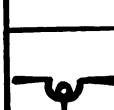
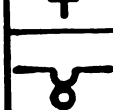
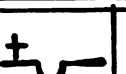
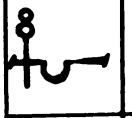
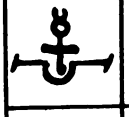
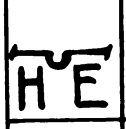
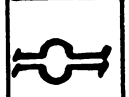
# TAFEL 82

| | |
|---|---|
| | Oleum tartari Sennerti |
| | Fornax |
|  | Lapis calaminaris |
| | Arsenicum sublimatum |
| | **Sublimare** |
| | Spiritus |
| | |
| | **Praecipitare,** filtrare |
| | Annus |
| | Spiritus |
| | Spiritus |
|  | Spiritus per descensum |
| | **Spiritus** (per descensum) |
|  | Minium, Mercurius Saturni praecipitatus |
|  | Mercurius sublimatus |

| | |
|---|---|
|  | Sol |
| | Spiritus |
|  | Mercurius praec. alb. |
| | Arsenicum sublimatum |
|  | Mercurius praec. alb. |
| | Mercurius praec. alb. |
| | Luna deficiens (decrescens) |
|  | Lapis cristallinus |
| | **Praecipitare,** destillare, Piger Henricus, Mercur. praec. alb. |
| | **Fixare** |
|  | Auripigmentum, Cera citrina |
| | |
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# TAFEL 83

| | | | |
|---|---|---|---|
| | Sal gemmae | | Borax |
| | Sal gemmae | | Matras |
| | Cucurbita | | Cucurbita coeca |
| | Mel | | Matras |
| | Marcasita aurea | | Sal petrae, Aphronitrum, Flos parietis, Faex nitri, Nitrum Graecorum, Nitrum stolidum |
| | Atramentum, Atrament. alb. | | |
| | Atramentum, Atrament. alb. | | |
| | Oleum tartari | | |
| | Oleum tartari | | |
| | Aes destillatum | | |
| | Sulfur | | |
| | Jupiter | | |
| | Jupiter | | |
| | Hora | | |
| | Hora | | |

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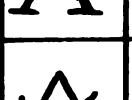
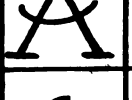
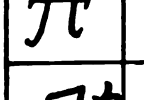
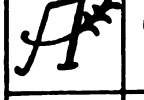
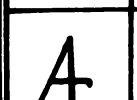
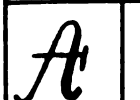
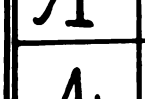
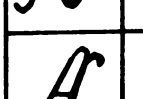
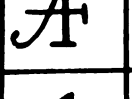
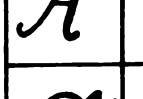
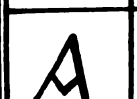
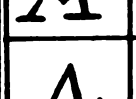
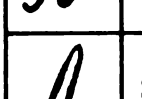
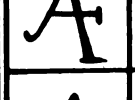
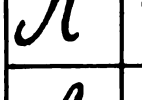
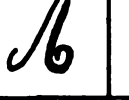
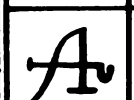
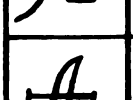
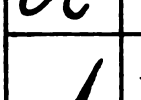
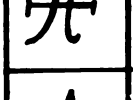
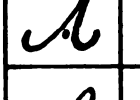
# TAFEL 84

| | | | |
|---|---|---|---|
|  | Alcohol vini, Auripigmentum | | Antimonium spagyriae praep. |
|  | Vitriolum Romanum |  | Sal commune |
| | Antimonium |  | Cera citrina |
|  | Cinis, Sal alcali |  | Pulverisare |
|  | Cinis, Sal alcali |  | Atramentum album |
|  | Antimonium, Atramentum alb. |  | Cobaltum |
| | Alumen ustum | | Acetum dest. |
|  | Atramentum, Cinis | | Sublimare |
|  | Spiritus communis, Aqua Regis |  | Alumen plumosum, Mercurius sublimatus |
|  | Sal commune |  | Volatile |
| | Aqua pluvialis |  | Volatile |
|  | Aqua Regis | | Leo |
|  | Atramentum alb. |  | Leo |
|  | Acetum destillatum |  | Sublimare, sub cinere |
| | Atramentum alb. | | Leo |

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| | | | |
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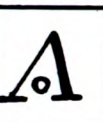
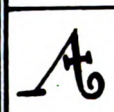
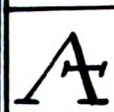
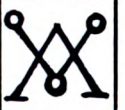
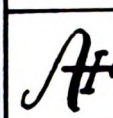
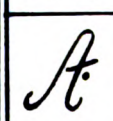
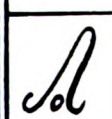
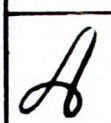
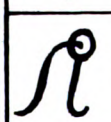
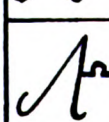
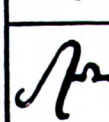
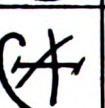
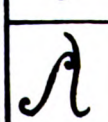
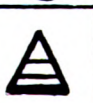
| | Aes, Cuprum |  | Drachma |
| | Sublimare | | Luna deficiens |
| | Sublimare | | Lapis magnes |
|  | Sublimare | | Lapis magnes |
|  | Hora |  | Aqua vitae |
|  | Argentum vivum | | Vitrum Antimonii |
| | Destillare | | Vinum adustum, Spiritus frumenti |
|  | Aes ustum | | Vinum adustum, Spiritus frumenti |
|  | Acetum destillatum | | Vinum album |
|  | Cerussa | | Aer |
|  | Alumen ustum | | **Aer** |
| | Alumen | | Lapis haematites |
|  | Sublimare | | Lignum |
|  | Sublimare |  | Lignum |
|  | Sublimare |  | Amalgama |

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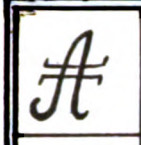
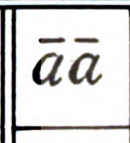
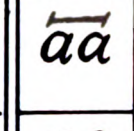
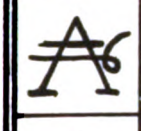
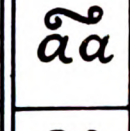
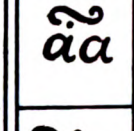
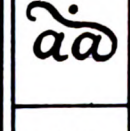
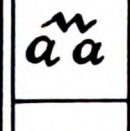
|  | Amalgama |  | Ana |
| | Sulfur |  | Ana |
|  | Ebullitio |  | Ana |
| | Amalgama |  | Ana |
| | Amalgama |  | Ana |
| | Amalgama |  | Materia |
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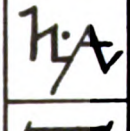
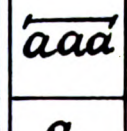
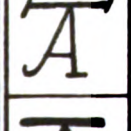
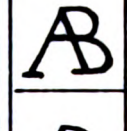
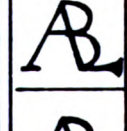
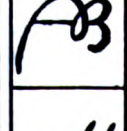
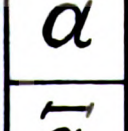
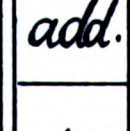
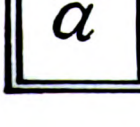
|  | Hora |  | Amalgama |
|  | Abstrahere | | Amalgama |
| | Vinum album |  | Bolus alba |
| | Aes, Venus |  | Bolus alba |
| | Borax | | Balneum arenae |
| | Borax |  | Cobaltum |
|  | Destillare (undeutliches „d“!) |  | Adde! |
|  | Ana | | Ad pondus omnium |

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| | | | |
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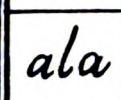
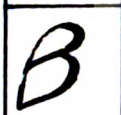
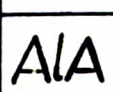
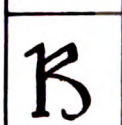
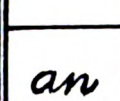
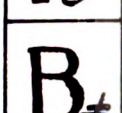
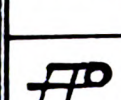
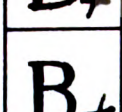
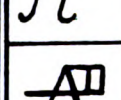
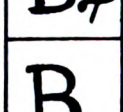
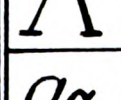
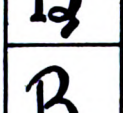
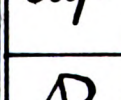
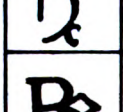
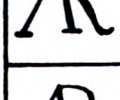
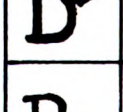
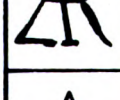
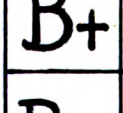
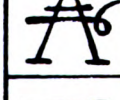
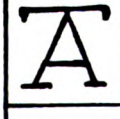
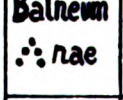
| | Cera citrina | | Balneum, Balneum vaporis, Succinum |
|  | Alumen |  | Marcasita aurea |
|  | Alumen |  | Cinnabaris |
|  | Ana |  | Balneum |
|  | Limus |  | Balneum |
|  | Limus |  | Balneum Mariae |
|  | Aqua |  | Recipe! |
|  | Balneum arenae, Aer, Lapis Armenus |  | Sal commune |
|  | Lapis Armenus |  | Succinum |
|  | Ebullitio |  | Balneum Arenae |
|  | Abstrahere | | Balneum Arenae |
|  | Aqua vitae | | Balneum Arenae |
| | |  | Balneum Cineris |
| | | | Marcasita |
| | | | Balneum Cineris |

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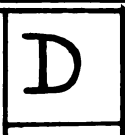
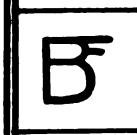
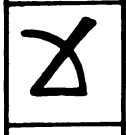
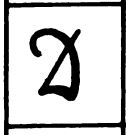
| | Flores benzoes |  | Digerere, Aq. fortis, Aq. Regis, siccare |
|  | Flores benzoes |  | Argentum pictorium |
| | Balneum Mariae |  | Siccare |
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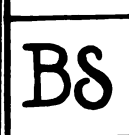
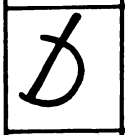
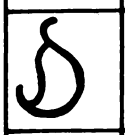
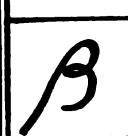
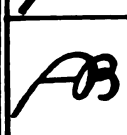
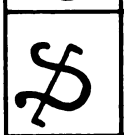
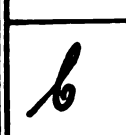
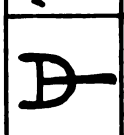
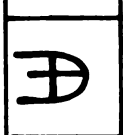
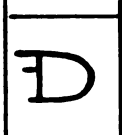
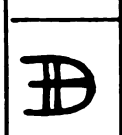
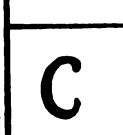
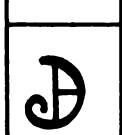
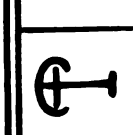
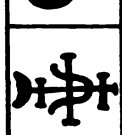
|  | Succinum album |  | Argentum pictorium |
| | Balneum Vaporis |  | Calx viva |
|  | Semis | | Destillare |
|  | Cobaltum |  | Cinnabaris |
|  | Sal alcali |  | Magnesia |
| | Vitriolum Romanum |  | Aes destillatum |
| | |  | Alumen plumosum |
| | |  | Ein doppelter philosoph. Monat |
|  | Siehe alle „C“ unter C |  | Atramentum album |
|  | Terra sigillata |  | Calcinatio Argenti |
| | | | Destillare, Bolus communis |

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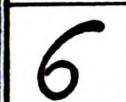
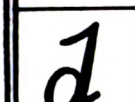
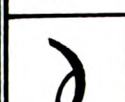
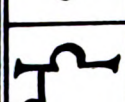
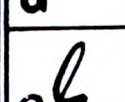
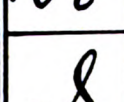


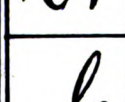


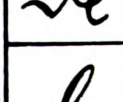




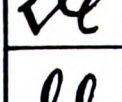


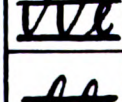


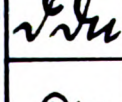


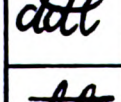


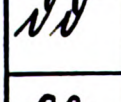
| | | | |
|---|---|---|---|
| | Mars | Dea | Durcheinander |
| | Destillare | DG | Digerere |
| | Acet. dest. | D.S. | Da et signa! |
| | Destillare | DS | Dissolvere |
| | Lapis calaminaris | | |
| | Destillare | | |
| | Destillare | E | **Solvere,** Lapis calcis, destillare, extrahere, Oboli quinque, Aurum, Tartarus emeticus |
| | Urina | E | Amalgama, Sal alcali, Gummi arabicum |
| | Tartarus | E | Caput mortuum, Cinis, Gummi arabicum, Lapis calcis |
| | Destillare | E | Elementum |
| | Destillare | E | Aes, Cuprum, Venus, Lapis calcis, Aes ustum |
| | Destillare | E | Lapis calaminaris, Crystallus |
| | Aes destillatum | E | **Solvere,** Vitellus, Aurum |
| | Acetum dest. | E | Alumen |
| | Destillare | E | Cinis isatis, Waidasche |

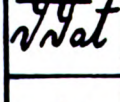












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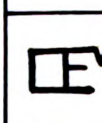
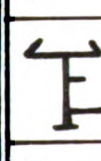
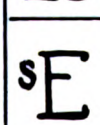
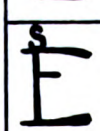
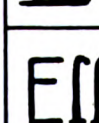
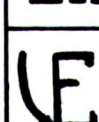
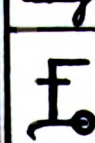
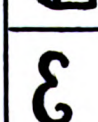
# TAFEL 90

| | | | |
|---|---|---|---|
| | Destillare | | Ein doppelter philosoph. Monat |
| | Calcinatio argenti | | Putreficare |
| | Lapis calaminaris | | Rote Korallen |
| | Atramentum, Atramentum **album** | | Korallenextrakt |
| | Atramentum, Atramentum **album** | | Acetum |
| | Atramentum album |  | **Sal vini essentiale** |
| | Sal alcali | | **Sal vini essentiale** |
|  | Tartarus | | **Schmelzfeuer** |
| | Vitriolum | | **Sal tartari essentiale** |
| | Vitriolum, Atramentum | | **Putrefactio** |
| | Alumen plumosum, Tutia |  | **Aurum** |
| | Fundere, Fusio |  | **Solvere** |
| | **Tartarus, Oleum tartari, siehe auch bei** + |  | **Essentia** |
| | Fusio |  | **Evaporare** |
|  | Fusio |  | **Granum** **Ochra** |

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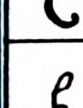
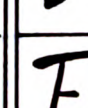
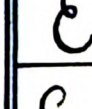
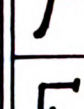
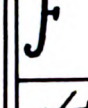
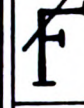
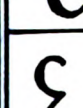
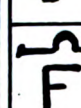
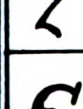
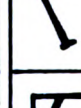
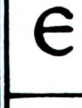
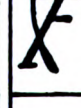
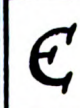
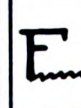
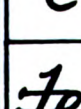
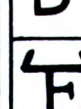
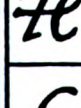
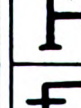
| | | | |
|---|---|---|---|
| | Reductio | | Flores |
| | Sextarius | | Fluere |
|  | Jupiter |  | Lutum philosophorum |
|  | Jupiter |  | Antimonii vitrum |
| | Sextarius |  | Sal ammoniacum |
| | Alumen |  | Tartarus |
| | Calx metallorum | | Vitellus |
|  | Cinis |  | Fluere |
|  | Phlegma | | Oleum tartari |
| | Aqua insipida |  | Mercurius Saturni praec., Minium |
|  | Sulfur, Coagulatio |  | Flores Benzoes |
|  | Jupiter, Stannum |  | Tartarus |
| | Lapides | | Fusio |
|  | Flores aeris |  | Fusio |
|  | Crocus Veneris, Aes ustum |  | Flores |

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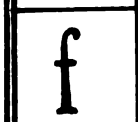
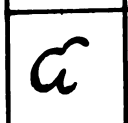
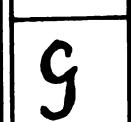
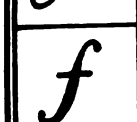
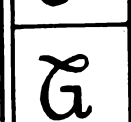
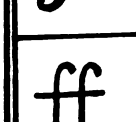
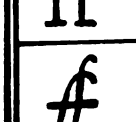
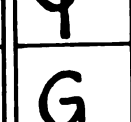
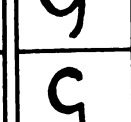
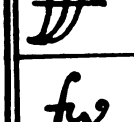
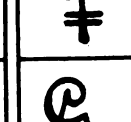
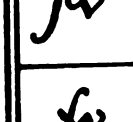
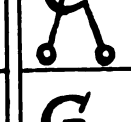
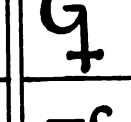
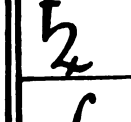
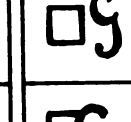
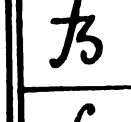
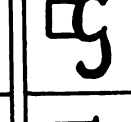
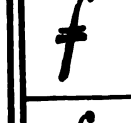
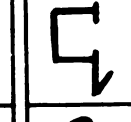
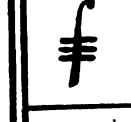
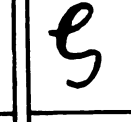
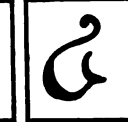
# TAFEL 92

| | | | |
|---|---|---|---|
| | Flores | | Calamus |
|  | Fiat |  | Cornu |
| | Fiat |  | Gummi, Gutta, Coagulatio |
|  | Jupiter, Tutia |  | Sal alcali |
|  | Saccharum | | Calx viva |
|  | Sextarius |  | Calx viva |
| | Stratum super stratum |  | Gummi |
|  | Solvere |  | Arsenicum rubrum |
|  | Solvere |  | Acetum |
| | Pars |  | Sal gemmae |
|  | Filtrum |  | Sal gemmae |
|  | Filtratio |  | Aqua |
|  | Cinnabaris |  | Nitrum |
|  | Crocus Veneris |  | Calcinare |
| | Scrupulus |  | Granum |

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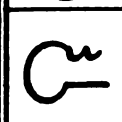
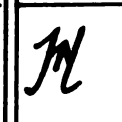
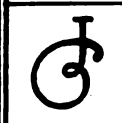
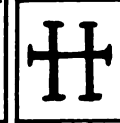
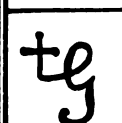
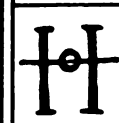
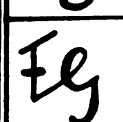
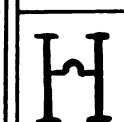
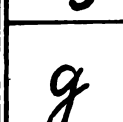
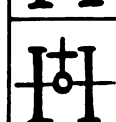
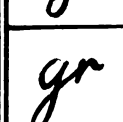
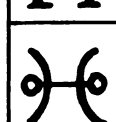
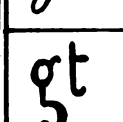
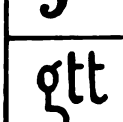
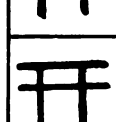
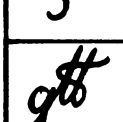
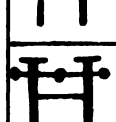
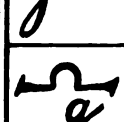
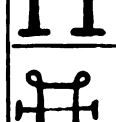
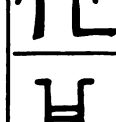
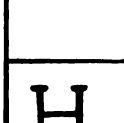
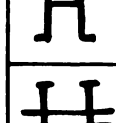
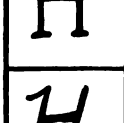
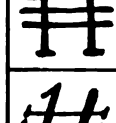
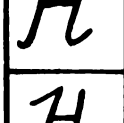
|  | Calcinare |  | Balneum Mariae |
|  | Spiritus nitri |  | Ferrugo |
|  | Pars |  | Aurum, Aurum musicum |
|  | Pars |  | Antimonium spagyriae praep., Mel |
|  | Gutta |  | Lapis magnes |
|  | Granum |  | Arsenicum rubrum |
|  | Gutta | | Aes destillatum |
|  | Gutta |  | Destillare |
|  | Guttae |  | Destillare |
|  | Gradare, Gradus ignis |  | Permiscere |
| | |  | Essig von „Mayan Thau“ |
|  | Herba, Aurichalcum, Aerugo |  | Antimonium spagyr. praep. |
|  | Sigillum hermeticum, Alumen, Sal alcali |  | Amalgama |
|  | Plumbum | | Stratum super stratum |

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| | | | |
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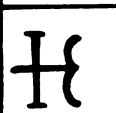
| | Ferrugo | | Herba, Sigillum hermeticum |
|  | Aes ustum | | Libra |
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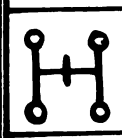
|  | Elementa | | Coagulatio |
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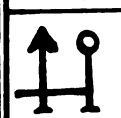
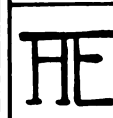
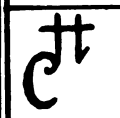
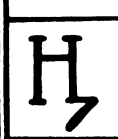
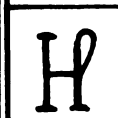
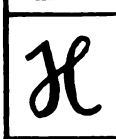
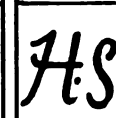
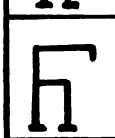
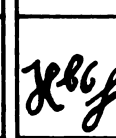
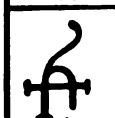
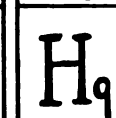
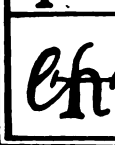
|  | Viride aeris |  | Coagulatio |
| | Pulverisare | | Crystallus |
|  | Pulverisare | | Lapis crystallus |
|  | Cinnabaris | | Aqua fortis |
|  | Praeparare | | Praeparare |
|  | Aqua Regis | | Lana illota |
| | Regulus Antimonii |  | Hermeticum sigillum |
|  | Regulus Antimonii |  | Reverberatio |
|  | Jupiter |  | Ferrum |
|  | Jupiter | | |

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| | | | |
|---|---|---|---|
| ℨ | Scrupulus | IL | Minium |
| ℨ | Scrupulus | ℨ̈ | Nitrum commune |
| ℨ | Lutum philosophorum | ℨnc. | Incompletus |
| ℨ | Jupiter | ℨncompt | Incompletus |
| ℨ | Marcasita argentea | ℜ | Sublimare |
| ℨ | Aurichalcum | | |
| ℨ | Lithargyrum | ℨ | Sal gemmae |
| ℨ | Marcasita aurea | ℨ | Calx viva |
| ℨ | Caper, Steinbock | Kos | Arsenicum album |
| ℨ | Jupiter | | |
| ℨ | Bismutum | L | Ferrum, Venus, Oboli quinque |
| ℨ | Borax | ℨ | Animalia |
| ℨ | Acetum destillatum | ℨ | Lixivium |
| ℨ | Dies et nox | ℨ | Lapis lazuli |
| ℨ | Aerugo | ℨ | Cuprum |

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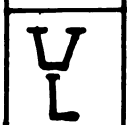
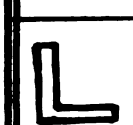
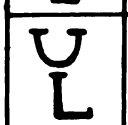
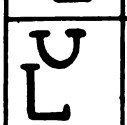
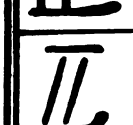
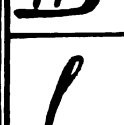
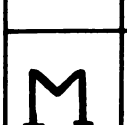
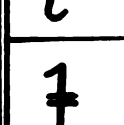
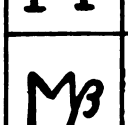
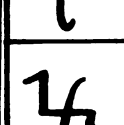
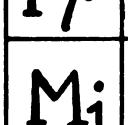
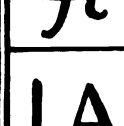
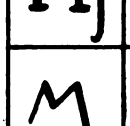
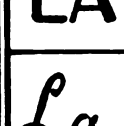
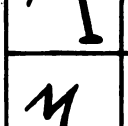
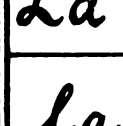
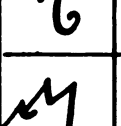
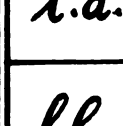
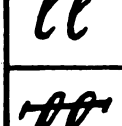
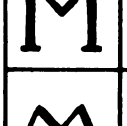
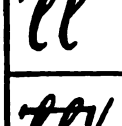
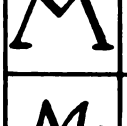
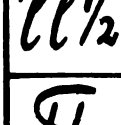
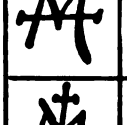
Original from UNIVERSITY OF MICHIGAN

| | | | |
|---|---|---|---|
| | Ignis lentus | | Lutatio, Lutum philosoph. |
| | Limatura martis |  | Mercurius vivus |
|  | Aurichalcum |  | Mercurius vivus |
| | Terra Lemnia |  | Mercurius vivus |
|  | Minium | | |
|  | Sulfur |  | Lapis magnes |
|  | Jupiter, Stannum |  | Manipulus semis |
|  | Lapis lazuli |  | Manipulus unus |
|  | Sal alcali |  | Vitriolum |
|  | Lege artis |  | Aqua mercurialis |
|  | Lege artis |  | Nux moschata |
|  | Stannum | | Vinum mortuum, Acetum |
|  | Libra |  | Marcasita |
|  | Libra semis |  | Coquere |
|  | Libra |  | Alumen |

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| | | | |
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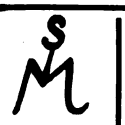
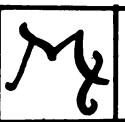
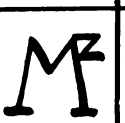
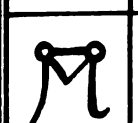
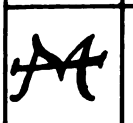
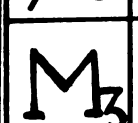
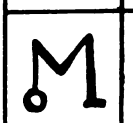
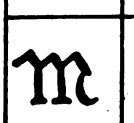
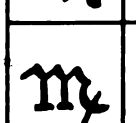
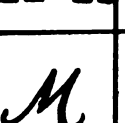
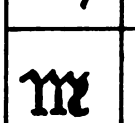
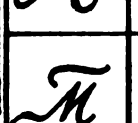
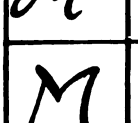
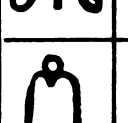
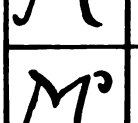
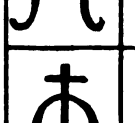
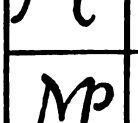
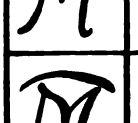
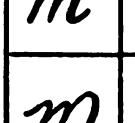
|  | Mixtura simplex |  | Caput mortuum |
| | Regulus Antimonii medicin. | | Caput mortuum |
|  | Tutia | | Alumen ustum |
|  | Mercurius Saturni |  | Coquere |
|  | Jupiter |  | Magnesia |
| | Nitrum commune, Mercurius Saturni praecip., Minium |  | Terra despumata, Scorpio |
| | Mercurius sublimatus | | Virgo |
| | Marcasita |  | Scorpio |
|  | Manipulus |  | Virgo |
|  | Borax | | Argentum |
| | Realgar | | Alumen plumosum |
|  | Miscere, Mel |  | Alumen plumosum |
|  | Massa pilularum |  | Alumen plumosum |
|  | Mel | | Liquefacere, Scorpio |
|  | Aq. Mercurii |  | Mercurius vivus, Argentum vivum |

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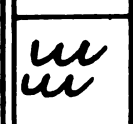
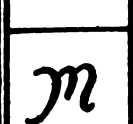
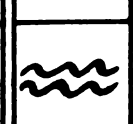
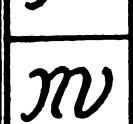
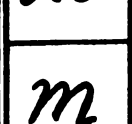
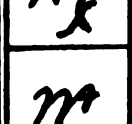
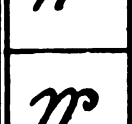
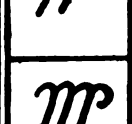
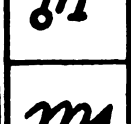
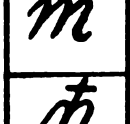
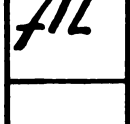
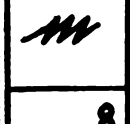
| | | | |
|---|---|---|---|
| | Spiritus vini | | Nitrum commune |
| | Virgo | | Aquarius |
| | Mortificare |  | Amphora, Aqua amphora |
|  | Scorpio |  | Aquarius, Camphora |
|  | Spiritus vini | | Materia |
|  | Virgo | | Materia |
|  | Stratum super stratum | | Manipulus |
|  | Stratum super stratum | | Gradatio |
|  | Viride aeris | MB | Balneum mariae |
|  | Scorpio | MB | Balneum mariae |
| | Tutia | BM | Balneum mariae |
|  | Alumen plumosum | | Gradare |
|  | Cinnabaris | | Gradare |
|  | Arsenicum sublimatum | MP | Massa pilularum |
| | Liquefacere | m.p. | Libra medicinalis |

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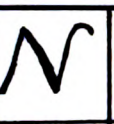
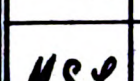
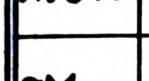
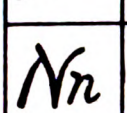
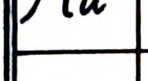
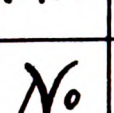
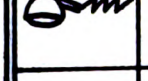
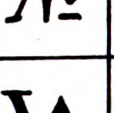
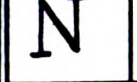
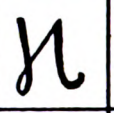
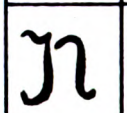
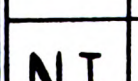
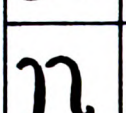
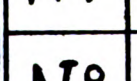
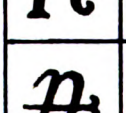
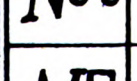
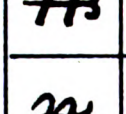
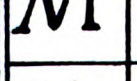
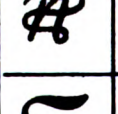
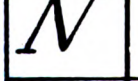
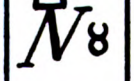
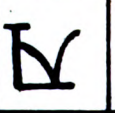
| | | | |
|---|---|---|---|
| | Mixtura |  | Plumbum |
|  | Mixtura simplex Ludovici | | Tingere |
|  | Multiplicare |  | Numero |
|  | Destillare |  | Numero |
|  | Lutatio, Aqua, Borax, Plumbum ustum |  | Nitrum commune |
|  | Lutatio | | Tartarus |
| | Plumbum ustum | | Squama aeris |
| | Lutare |  | Lapis lazuli |
| | Aqua |  | Lapis lazuli |
|  | Aqua vitae |  | Jupiter |
|  | Unica semis |  | Jupiter |
|  | Borax |  | Vitriolum |
|  | Borax |  | Sal alcali |
|  | Nux moschata | | Materia |
|  | Nitrum |  | Crocus Solis |

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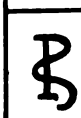
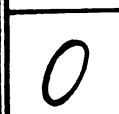
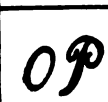
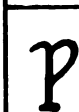
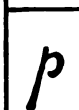
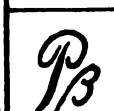
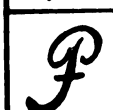
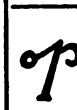
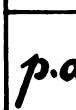
| | | | |
|---|---|---|---|
| | Destillare | | Capella |
| | Aqua, Aquarius, liquefacere | | Solutio, praeparare, Solvatio |
| | Cinnabaris | | Alumen plumosum |
| | Nux moschata | | Pulvis |
| | |  | Cerussa |
|  | Capella, Antimonii vitrum, Siehe auch unter O | | Pulvis |
| | Alumen | | Sublimare |
|  | Alumen plumosum |  | Calx metallorum |
| | |  | Pugillus, Pulvis |
| | Plumbum, Saturnus, Pugillus | | Pugillus semis |
|  | Pugillus semis | | Pugillus unus |
|  | Unica |  | Alumen plumosum |
| | Pulverisare |  | Per deliquium |
| | Capella | | Aqua fortis, Aqua Regis |
| | Praeparare | | Praeparare |

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|---|---|---|---|
| P̂P | Praecipitare | Qℰ | Quinta essentia |
| PP | Praeparare | QE | Quinta essentia |
| PP | Praeparare | Qℰ | Quinta essentia |
| ppt | Praeparatum | | Aqua amphora |
| ppt | Praeparatum | q | Cotyla |
| PR | Acetabulum | q | Quinta essentia |
| Pulv. | Pulvis | q/a | Quinta essentia |
| ptp | Gummi | qee | Quinta essentia |
| ptp | Gummi | q.l. | Quantum licet |
| ptp | Gummi | q.p. | Quantum placet |
| ptp | Gummi | q.pl. | Quantum placet |
| | | q.ſ | Quantum satis |
| Q | Alumen plumosum, Crystallus, Fimus equinus | q.s. | Quantum satis |
| Q | Borax | q.v. | Quantum vis |
| 2Q | Borax | | |

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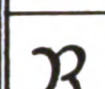
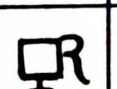
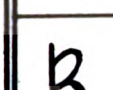
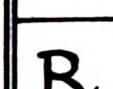
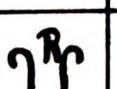
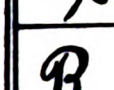
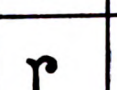
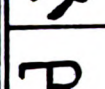
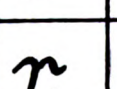
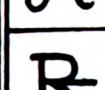
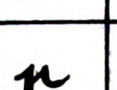
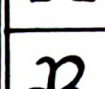
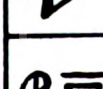
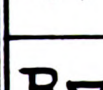
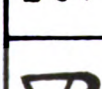
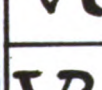
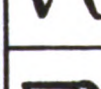
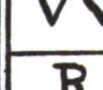
| | Aqua pluvialis, Tartarus, Reverberatio, Sal alcali, Balneum vaporis, Jupiter, Borax | | Ignis reverberius |
|  | Alumen ustum, Alumen plumosum |  | Sulfur tartari |
|  | Borax | | Aqua Regis |
|  | Recipe! |  | Vinum rubrum |
|  | Recipe! |  | Borax |
|  | Sublimare |  | Tartarus calcinatus |
|  | Sal alcali |  | Mercurius praecipitatus rubr. |
|  | Alembicus | Rad. | Radix |
|  | Aqua pluvialis | Ras. | Rasura, Raspatum |
|  | Aqua pluvialis | rasur. | Rasura, Raspatum |
|  | Aqua Regis | rasp. | Rasura, Raspatum |
|  | Aqua Regis, Borax | RC | Reducere |
|  | Aqua Regis | Rec. | Receptum |
|  | Aqua Regis | Recept. | Receptum |
| | Aqua Regis | Rhab. | Rhabarbarum |

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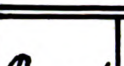
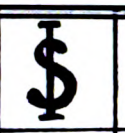
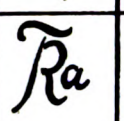
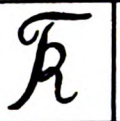
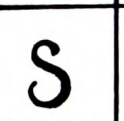
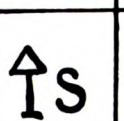
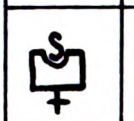
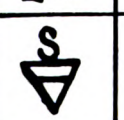
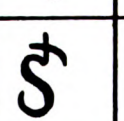
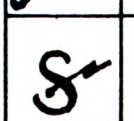
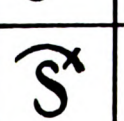
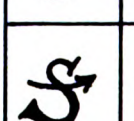
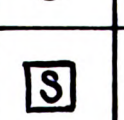
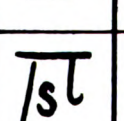
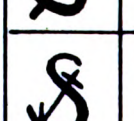
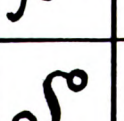
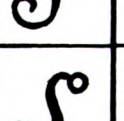
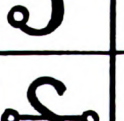
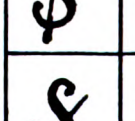
| | | | |
|---|---|---|---|
|  | Receptum |  | Cinnabaris, Sal commune, Spiritus, Arsenicum album |
|  | Tinctura | | **Crocus,** Crocus aromaticus |
|  | Tinctura | | Chalybs |
| | | | Cinis |
|  | **Semis,** Unica semis, Mercurius sublimatus, Aqua, Arena, Spiritus, Arsenicum album | | Spiritus Mercurii |
|  | Calcinare |  | Accidus vinosus crudus = Rohe Weinsäure |
|  | Terra sigillata | | Venus, Cuprum, solvere, Mars, Crocus |
|  | Tinctura |  | Crocus |
|  | Tinctura |  | Nox, Chalybs |
|  | Terra sigillata | | Chalybs |
|  | Libra |  | Chalybs |
|  | Solvere | | Solvere |
|  | Solvere | | Crocus, Crocus aromaticus |
|  | Arsenicum album |  | Vitellus |
| | Lana illota | | Venus |

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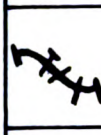
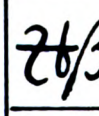
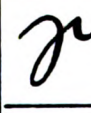
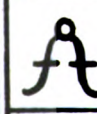
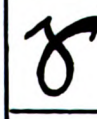
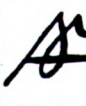
| | | | |
|---|---|---|---|
| | Putreficatio | | Lapis lazuli |
| | Alumen, Fuligo, Vitriolum | | Oleum expressum |
| | Oleum commune |  | Fermentatio |
| | Semis, siccum, Aqua, signa | | Fel Vitri, Libra |
| | Unica | | Sal capitis mortui |
| | Sextarius | | Sal capitis mortui |
| | Calx | | Solvere, Auripigmentum |
| | Alembicus | | Jupiter |
| | Calx viva | | Saturnus |
| | Calx viva |  | Ein halb Pfundt |
| | Lapis lazuli |  | Lixivium, Albumen |
| | Stratum super stratum | | Mercurius vivus |
| | Stratum super stratum | | Cucurbita coeca |
|  | Crocus Veneris |  | Marcasita |
| | Alumen |  | Cobaltum |

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| | | | |
|---|---|---|---|
| ♈ | Matras | Sp | Spiritus |
| ♈I | Albumen | Spec. | Species |
| Σ | Saccharum | Spir. | Spiritus |
| [Σ | Septimana | SS | Saccharum |
| [Σ] | Septimanae duae | S℥ | Unica semis |
| SA | Secundum artem | S+S | Gummi arabicum |
| S.A | Secundum artem | S♭S | Gummi |
| S.a | Secundum artem | SSS | Stratum super stratum |
| S.a. | Lege artis | S♭S | Gummi arabicum |
| S.A | Lege artis | ♀ Ustum | Aes ustum |
| S.C | Succinum citrinum | S.V. | Sine vino |
| Sem. | Semen | SVA | Succinum album |
| S et C | Simplex et compositum | SYC | Succinum citrinum |
| Sign. | Signetur, signa! | | |
| SP | Spiritus | ♌ | Leo |

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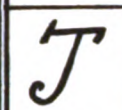
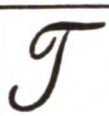
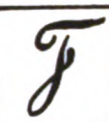
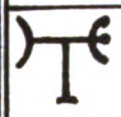
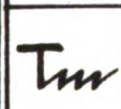
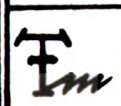
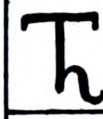
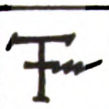
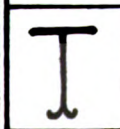
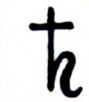
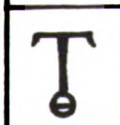
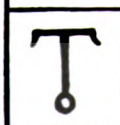
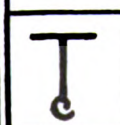
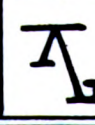
| | Tigillum, Nitrum commune, gradare, Oboli quatuor, Crucibulum, Tinctura. | | Viride aeris |
|  | Capella | | Aes, Cuprum |
|  | Argentum pictorium, Tinctura, Gradatio | | Aes, Cuprum |
|  | Lutum philosophorum | | Argumentum |
| | Sulfur | | Testa |
| | Digerere | | Oleum talchi, Ol. talci |
|  | Lapis lazuli | | Fortax, Rost |
|  | Mercurius sublimatus | | Oleum talchi |
|  | Mercurius sublimatus |  | Reverberium |
|  | Mercurius sublimatus | | Reverberium |
|  | Borax |  | Arsenicum sublimatum |
|  | Aqua vitae | | Acetum vini rubri |
|  | Vitrum | | Aes viride |
|  | Calcinare | | Borax |
| | Sal tartari |  | Borax |

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# TAFEL 107

| | | | |
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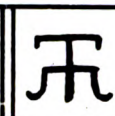
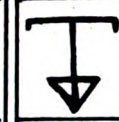
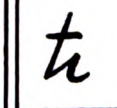
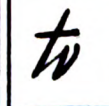
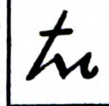
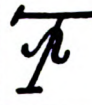
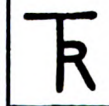
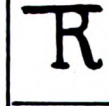
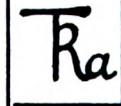
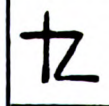
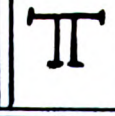
| | Vinum album |  | Alumen |
| | Venus |  | Atramentum, Vitriolum |
| | Cuprum, Venus | | Tumor |
| | Borax |  | Plumbum, Cornu |
| | Borax |  | Crocus Veneris |
| | Borax |  | Plumbum |
| | Plumbum | | Plumbum |
|  | Sal alcali | | Tinctura |
| | Plumbum |  | Tinctura, Terra |
| | Plumbum |  | Tinctura, Terra |
| | Caput mortuum, Jupiter, Stannum |  | Tinctura |
| | Tutia | | Tinctura |
| | Antimon. spagyr. praep. | | Tinctura |
| | Alumen plumosum |  | Sal gemmae |
| | Dies et nox |  | Calamus |

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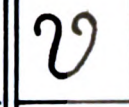
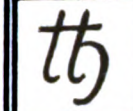
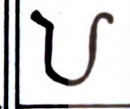
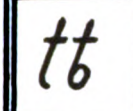
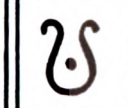
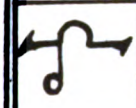
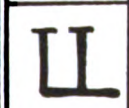
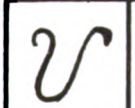
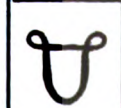
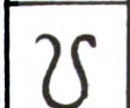
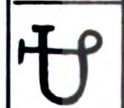
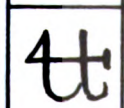
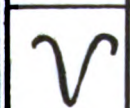
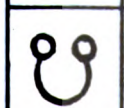
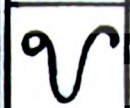
| | | | |
|---|---|---|---|
| | Alumen |  | Purificare |
|  | Libra |  | Purificare |
|  | Libra | | Purificare |
| | Pulvis |  | Purificare |
|  | Lapis calaminaris | | Alumen |
| | | | Filum candelae, Docht |
| | Hydrargyrum, Argentum vivum | | Vinum rubrum |
| | Alcali, Jupiter | | Autumnus |
|  | Minium, Terra lemnia, Aqua Regis | | Alumen |
| | Alumen | | Bolus communis |
|  | Arculatio |  | Capricornus |
|  | Tundere, Aries, solvere |  | Talcum |
| | Capricornus |  | Arena |
|  | Aurum, solvere |  | Realgar, purificare |
|  | Vinum album | | Drachma |

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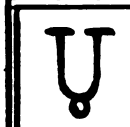
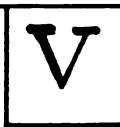
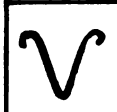
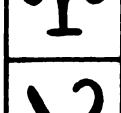
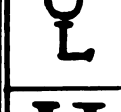
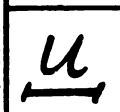
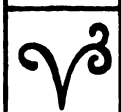
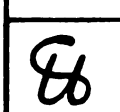
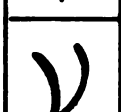
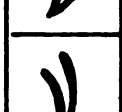
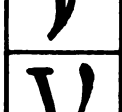
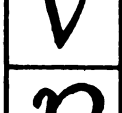
|---|---|---|---|
|  | Argentum vivum |  | Vinum, Aqua, vivum, Aries, Balneum vaporis, Obulus dimidius, Cuprum, Oleum tartari Sennerti, Nox |
| | Sal gemmae |  | Vivum |
| | Coagulatio | | Alumen, Crucibulum, sub cinere |
| | Vinum mortuum, Acetum | | Aries |
| | Mercurius vivus | | Tartarus, Muffel |
| | Mercurius vivus |  | Marcasita, Nitrum, Nox, Tigillum |
| | Mercurius vivus | | Aries, Lapides |
|  | Mercurius vivus | | Aqua pluvialis |
| | Crucibulum | | Ferrum |
| | Tartarus | | Argentum |
|  | Libra |  | Reductio |
|  | Spiritus |  | Crucibulum |
| | Spiritus |  | Marcasita, Nitrum, Nox, Tigillum |
| | Tartarus calcinatus |  | Cinnabaris |
| | |  | Reductio |

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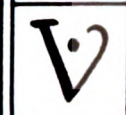
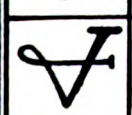
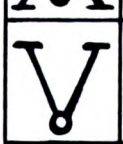
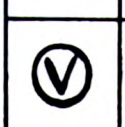
# TAFEL 110

| | | | |
|---|---|---|---|
| | Spiritus vini | | Borax |
| | Minium | | Borax |
| | Vitellus |  | Fixus, fixum |
| | Vitellus | | Filtrare |
| | Argentum vivum, Spirit. vini | | Purificare |
| | Spiritus vini | | Spiritus vini |
|  | Aqua Regis | | Sal alcali, Aqua vitae |
| | Aqua Regis, Sal ammoniac. | | Aqua vitae |
| | Argentum |  | Vitellus, Sal gemmae (Marcasita) |
| | Sulfur | | Sal gemmae |
| | Argentum, Lutatio, Aqua vitae, Ortus lunae, Cera citrina | | Lapides |
| | Aqua vitae | | Sal gemmae |
| | Quinta essentia | | Crucibulum |
| | Quinta essentia, Vinum emeticum |  | Vinum circulatum |
| | Borax | | Vinum mortuum, Acetum |

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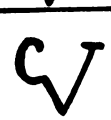
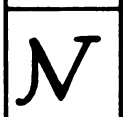
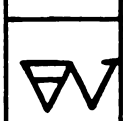
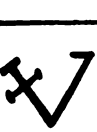
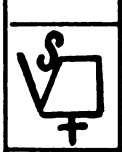
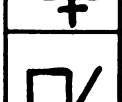
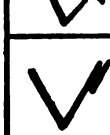
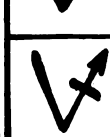
| | | | |
|---|---|---|---|
| | Vinum adustum | | Corium |
| | Argentum | | Alembicus, Vitrum |
| | Borax | | Vivum |
| | Borax | | Vinum adustum |
| | Vinum coctum | | Vinum adustum |
|  | Sal gemmae | | Alembicus |
| | Vinum sublimatum | | Minium |
| | Aqua |  | Plumbum ustum |
| | Fixare | | Plumbum ustum |
| | Hydrargyrum |  | Terra virginea |
| | Crucibulum | | Sub cinere |
|  | Crucibulum |  | Spiritus vini tartarisatus |
| | Sal alcali |  | Fel vitri |
|  | Vitriolum | | Aqua vitae |
|  | Corium (= Haut, Leder, Schale, Rinde) | | Vinum album, Vinum Hippocraticum |

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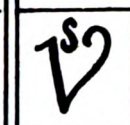
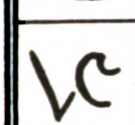
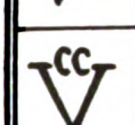
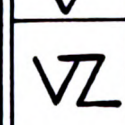
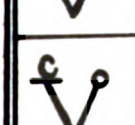
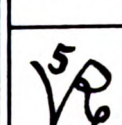
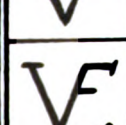
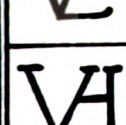
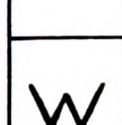
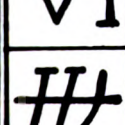
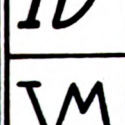
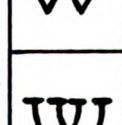
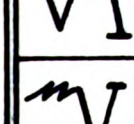
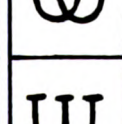
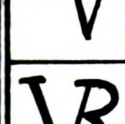
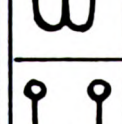
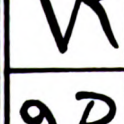
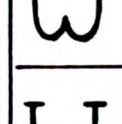
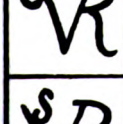
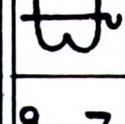
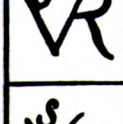
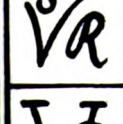
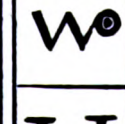
| | | | |
|---|---|---|---|
| | Spiritus vini rect. | | Spiritus vini rect., Aqua vitae |
| | Balneum vaporis |  | Spiritus vini |
|  | Vinum correctum | | Aqua vitae |
|  | Cornu cervi ustum |  | Cineres clavellati |
|  | Cornu cervi ustum |  | Spiritus vini rect. |
|  | Vinum emeticum | | |
|  | Vinum Hippocraticum |  | Coagulatio |
|  | Sal alcali | | Terra virginea |
|  | Vinum medicatum |  | Argentum |
|  | Cinnabaris |  | Calx metallorum |
|  | Aqua Regis, Vinum rubrum, Calx viva, Urina |  | Alumen |
|  | Borax |  | Aes, Cuprum, Aes ustum |
|  | Spiritus vini rect. |  | Alumen ustum |
|  | Spiritus vini rect. | | Crocus auri |
|  | Spiritus vini rect. |  | Ignis lentus |

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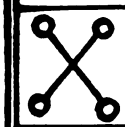
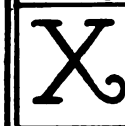
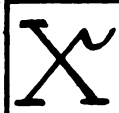
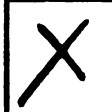
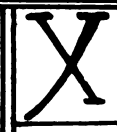
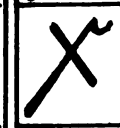
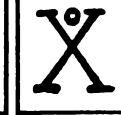
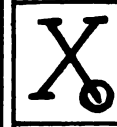
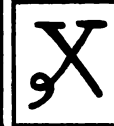
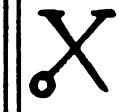
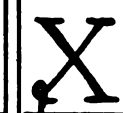
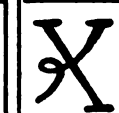
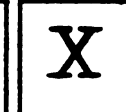
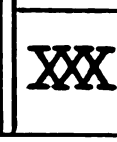
| | |
|---|---|
| | Borax |
| | Tartarus calcinatus |
| | Tartarus |
| | |
| | Acetum, Sal alcali, Tigillum, Talcum, contervet, Obulus unus, Acetum dest., Sulfur rubrum. Siehe auch bei X |
| | Antimonium |
|  | Crucibulum |
|  | Sal marinum |
| | Scrupuli quinque |
| | Antimonium spagyr. praep. |
|  | Crucibulum |
| | Calx viva |
|  | Vinum |
| | Tutia |
| | Vesica destillatoria |

| | |
|---|---|
|  | Contervet |
|  | Calx |
| | Acetum destillatum |
| | Acetum destillatum |
|  | Cera citrina |
| | Acetum destillatum |
|  | Rustgelb |
|  | Aurum musicum |
|  | Aurum musicum |
|  | Aurum musicum |
|  | Argentum musicum |
| | Argentum musicum |
|  | Primus gradus ignis |
| | Secundus gradus ignis |
|  | Tertius gradus ignis |

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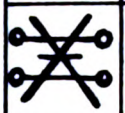
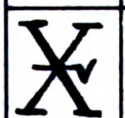
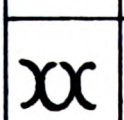
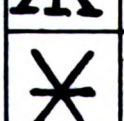
# TAFEL 114

| | | | |
|---|---|---|---|
| | Quartus gradus ignis | | Acetum destillatum |
| | Calx | | Mel |
| | Calx, Crucibulum | | Acetum destillatum |
| | Crucibulum | | Aes, Cuprum |
| | Sal commune | | Aes ustum |
| | Sal commune |  | Cuprum |
| | Calx viva | | Cuprum |
| | Sal gemmae, Sal alcali |  | Compositio, Sal ammoniacum, Aestas |
| | Sal ammoniacum, Sal alcali | | Siehe bei ☽ |
| | Sal ammoniacum | | Alembicus |
| | Sal ammoniacum |  | Sal ammoniacum |
| | **Hora** | | Lux sextilis, Minium |
| | Hora |  | Lux sextilis, Sal alcali |
| | Acetum cydoniorum | | Sal ammoniacum, Compositio, Aestas |
| | **Mensis** | | Spiritus |

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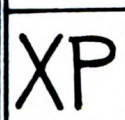
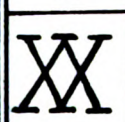
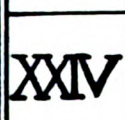
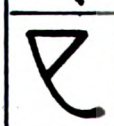
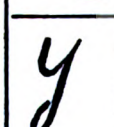
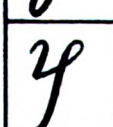
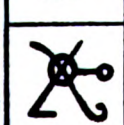
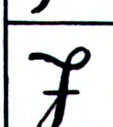
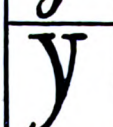
# TAFEL 115

| | | | |
|---|---|---|---|
| | Spiritus | | Tutia |
| | Chalybs, Ferrum | | Tigillum |
| | Cornu | | |
| | Sal ammoniacum | | Ferrum |
|  | Alembicus | | Tartarus, Plumbum |
|  | Alembicus, Aurichalcum, Coagulatio | | Vitriolum |
|  | Granum | | Vitriolum Romanum |
| | Aes dest., Tutia, Sal commune | | Ferrum |
| | Aes viride, Auri calx | | Tigillum |
| | Aes viride, Auri calx | | Tigillum |
| | Aes viride |  | Tigillum |
| | Aes viride |  | Plumbum |
| | Aes viride |  | Tartarus |
|  | Mel |  | Aurum, solvere |
| | Mel |  | Ferrum |

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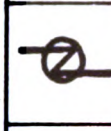
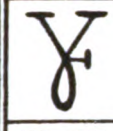
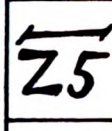
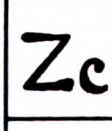
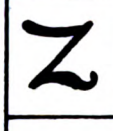
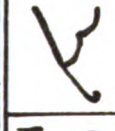
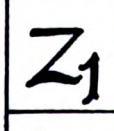
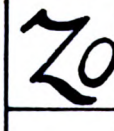
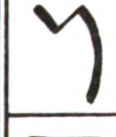
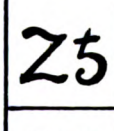
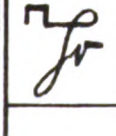
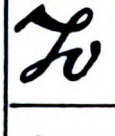
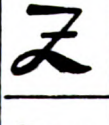
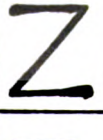
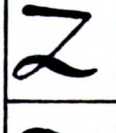
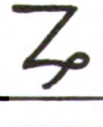
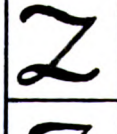
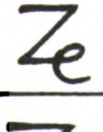
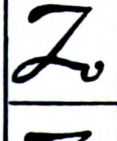
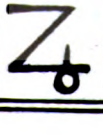
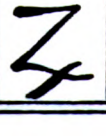
| | | | |
|---|---|---|---|
| | Bismutum | | Flores aeris |
| | Metalla |  | Cuprum caldarium |
|  | Metallum |  | Sal gemmae |
| | Metallum |  | Zinc (Geoffroy) |
| | Metalla |  | Calcinare |
|  | Alcali |  | Tepes archevorum |
| | Sal alcali |  | Ignis |
|  | Sal ammoniacum |  | Sal Saturni |
| | Tigillum | | Aurum, Spiritus vini, solvere |
|  | Solvere |  | Solvere |
| | |  | Ignis, Tartarus |
|  | Sal commune, calcinare |  | Sal commune |
|  | Reverberatio |  | Lutum sapientiae, Aqua vitae |
|  | Flores aeris |  | Lutum philosophorum |
|  | Antihecticum Poterii |  | Recipere, Zinc (Geoffroy) |

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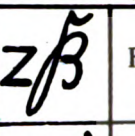
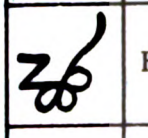
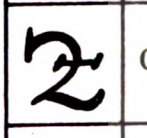
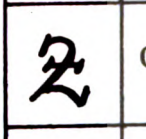
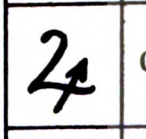
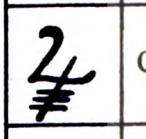
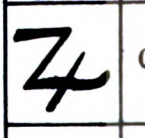
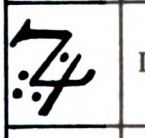
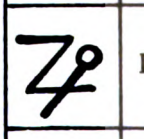
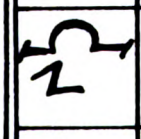
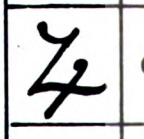
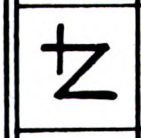
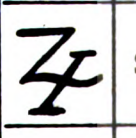
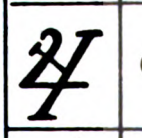
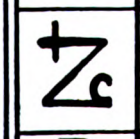
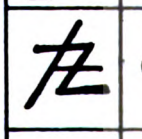
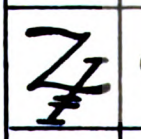
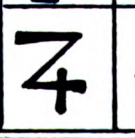
| | | | |
|---|---|---|---|
| | Tartarus |  | Recipere |
| | Sal commune, Sal ammoniacum |  | Recipere |
| | Albumen |  | Calcinare |
| | Calx viva |  | Caementare |
| | Liquefacere |  | Calx viva |
| | Quinta essentia vini |  | Cinnabaris |
| | Caementare |  | Quinta essentia vini |
| | Calx viva |  | Limatura Stanni |
| | Capitellum |  | Lapis calaminaris |
|  | Calx viva |  | Quinta essentia vini |
|  | Sal gemmae |  | Sal commune |
| | Lapis calaminaris |  | Caementare |
|  | Calx viva |  | Caementare |
| | Ferrum |  | Cinnabaris |
| | Zingiber |  | Jupiter |

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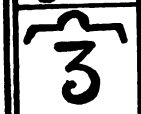
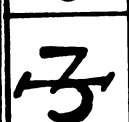
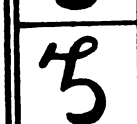
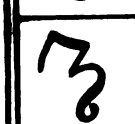
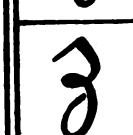
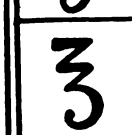
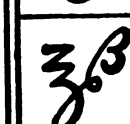
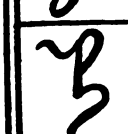
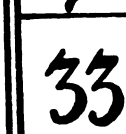
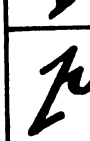
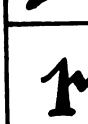
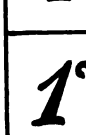
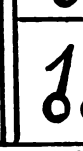
| | |
|---|---|
| | Vitriolum, Atramentum |
| | Saccharum |
| | Drachma, Tartarus, Cinnabaris, Sal gemmae. Siehe auch unter „3“ |
| | Drachma semis |
| | Unica semis (4 Drachmen) |
|  | Alembicus |
| | Alembicus |
|  | Mars, Ferrum |
|  | Nitrum |
|  | Plumbum |
|  | Liquefacere |
|  | Unica |
|  | Semiunica |
|  | Jupiter |
|  | Cinnabaris, Unica |

| | Zahlen |
|---|---|
| | Bismutum |
| | Sublimare |
| | Alumen |
| | Amalgama |
| | Alumen |
|  | Cuprum |
|  | Hora |
|  | Hora |
| | Sulfur |
| | Antimonium spagyr. praep. |
| | Levor Auri |
| | Jupiter, Stannum |
| | Fel vitri |
|  | Alumen |

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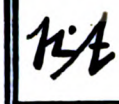
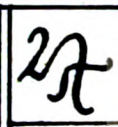
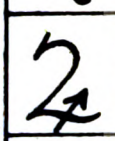
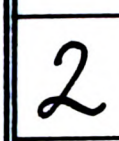
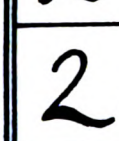
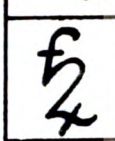
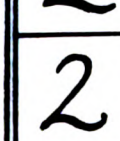
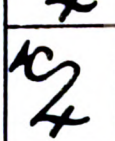
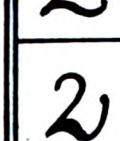
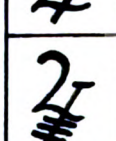
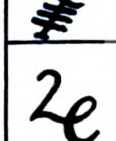
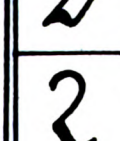
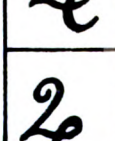
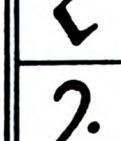
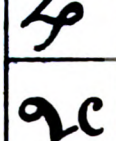
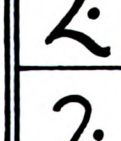
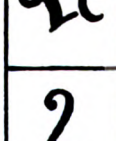
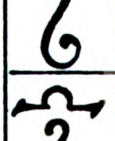
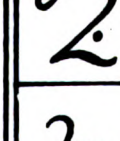
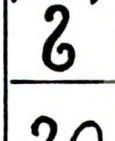
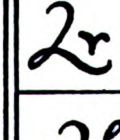
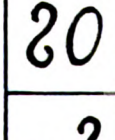
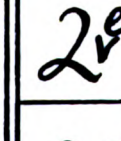
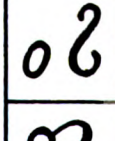
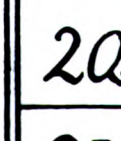
| | | | |
|---|---|---|---|
|  | Hora |  | Sal commune |
| | |  | Calx viva |
|  | Vinum album, Quinta essentia | | Calcinare |
|  | Alumen, Alumen ustum |  | Pars |
|  | Capricornus |  | Pars |
|  | Evacuatio |  | Cinnabaris |
| | Evacuatio |  | Recipe! |
|  | Alumen |  | Tartarus |
|  | Solvere |  | Commixtio |
|  | Quinta essentia |  | Alumen, Atramentum, Vitriolum |
| | Aurum |  | Caementare |
|  | Quinta essentia vini |  | Ignis |
|  | Quinta essentia vini |  | Autumnus |
|  | Borax |  | Solvere |
|  | Ferrugo | | |

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| | | | |
|---|---|---|---|
| ʒ | **Drachma,** Cinnabaris, Tartarus | 4ʒ | Cinnabaris |
| ʒj | **Drachma una,** Cinnabaris Sal gemmae | | |
| ʒß | Drachma semis | 4 | Tigillum |
| ʒß | Drachma semis | 4 | Sal alcali, destillare |
| ʒ | Mars | 4 | Stannum, Jupiter |
| ʒ | Alembicus | 4 | Caput mortuum, Lixivium |
| ʒ | Alembicus | 4 | Borax |
| ʒ | Cinnabaris | 4 | Aurum |
| oʒ | Tartarus | 4 | Minium |
| ʒ | Nitrum | 4 | Aurum |
| ʒ | Vitrum | 4 | Aqua vitae |
| ʒ | Destillare | 4 | Aqua fortis |
| ʒ | **Unica** | 4 | Oleum tartari Sennerti |
| ʒß | Unica semis | 4 | Crocus |
| +ʒ | Plumbum | 4 | Sal alcali |

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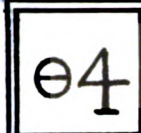
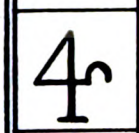
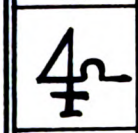
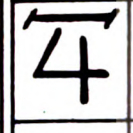
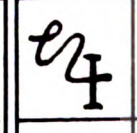
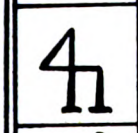
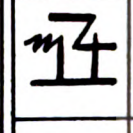
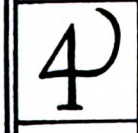
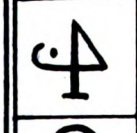
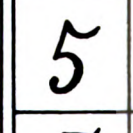
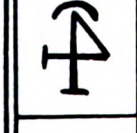
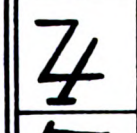
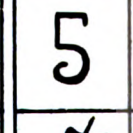
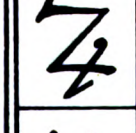
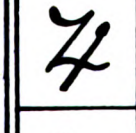
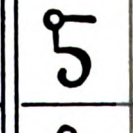
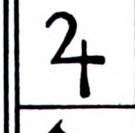
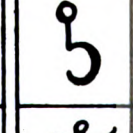
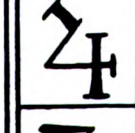
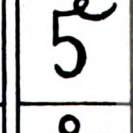
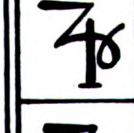
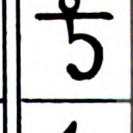
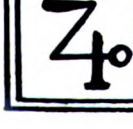
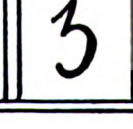
|  | Sal alcali | | Bezoardicum joviale |
|  | Oleum tartari Sennerti | | Jupiter, Sal commune |
|  | Quinta essentia |  | Tartarus |
| | Limatura Plumbi |  | Pars cum parte |
|  | Talcum |  | Liquefacere |
|  | Elementa, Principia corporum | | |
|  | Acetum destillatum |  | Sal ammoniacum |
|  | Elementa, Principia corporum | | Saturnus |
|  | Jupiter, Sal commune |  | Aurichalcum |
|  | Lapis calaminaris | | Tartarus |
|  | Quinta essentia vini |  | Crocus Veneris |
|  | Jupiter, Stannum, calidus |  | Aurichalcum |
|  | Sal commune |  | Sextarius |
|  | Marcasita |  | Aurichalcum |
|  | Marcasita |  | Sal ammoniacum |

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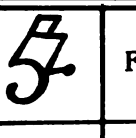
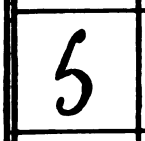
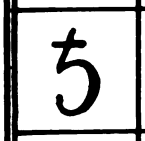
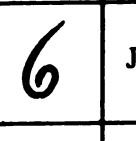
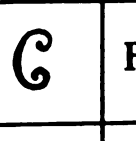
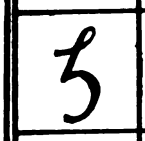
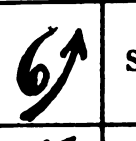
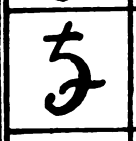
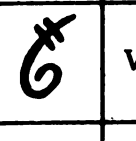
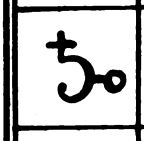
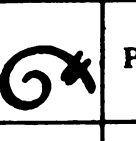
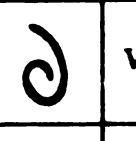
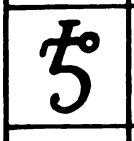
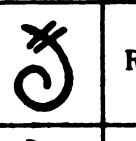
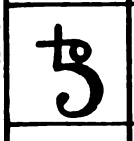
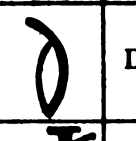
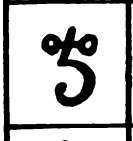
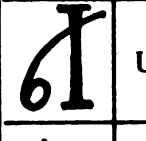
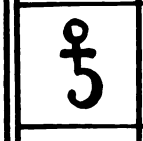
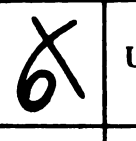
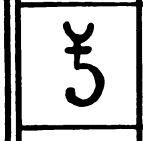
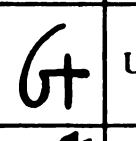
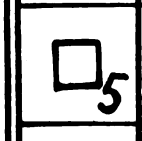
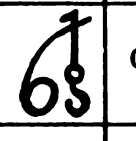
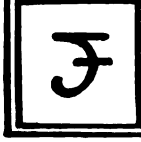
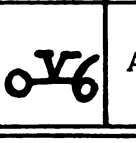
| | Ferrum |  | Ferrum |
|  | Saturnus | | |
|  | Saturnus, Plumbum |  | Jupiter |
| | Antimonium |  | Retorta. Siehe auch C |
|  | Nitrum |  | Sal gemmae |
|  | Calx Saturni |  | Vitrum |
|  | Oleum Saturni |  | Pulverisare |
| | Oleum Saturni |  | Vitriolum |
|  | Levor Argenti |  | Receptaculum |
|  | Aqua vitae |  | Destillare |
|  | Levor Auri, Aqua vitae |  | Urina |
|  | Arsenicum album |  | Urina |
|  | Arsenicum album |  | Urina |
|  | Mars |  | Gummi arabicum |
|  | Flores Antimonii |  | Arsenicum rubrum |

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| | | | |
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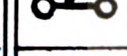
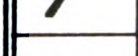
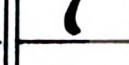
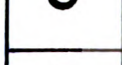
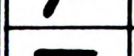
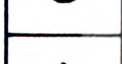
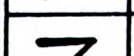
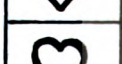
| | Vitriolum, Crucibulum, Atramentum album, Arsenicum subl., Atramentum |  | Arsenicum rubrum |
| | Oleum tartari, Sal commune, Alumen | | Caementare |
|  | Aurum, solvere |  | Calx viva |
| | Arsenicum sublimatum | | Coagulatio |
| | Solvere | | |
| | Capricornus, Balneum mariae | | Aqua vitae, Aurum, Aqua, Mercurius auri, Sal alcali, Tauri priapus, Sal gemmae, Cuprum, Arsenicum album, Lapis haematites, Spiritus auri |
| | Jupiter, Stannum | | Marcasita aurea, Zincum |
| | Jupiter, Stannum |  | Lapis lazuli |
| | Sal commune | | Aes destillatum |
| | Sal commune |  | Sal gemmae |
| | Jupiter, Stannum | | Sal gemmae |
|  | Vitriolum |  | Auripigmentum, Annus |
| | Tutia, Antimonium | | Mercurius auri |
|  | Spiritus vini |  | Cinnabaris |
| | Sulfur | | Spiritus |

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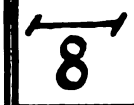
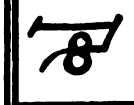
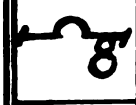
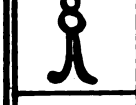
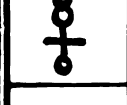
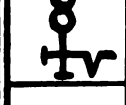
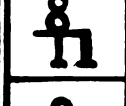
|  | Digerere |
|  | Cineres Plumbi |
|  | Digerere |
| | Coagulatio |
| | Sal commune |
| | Vitriolum |
|  | Vinum album |
| | Vinum rubrum |
| | Mercurius sublimatus, Aqua Regis |
|  | Mercurius aeris |
| | Mercurius sublimatus |
| | Mercurius sublimatus |
|  | Mercurius sublimatus |
|  | Mercurius Saturni |
| | Metalla septem |

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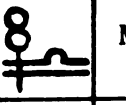
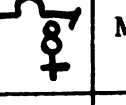
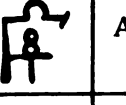
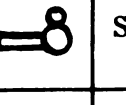
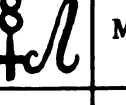
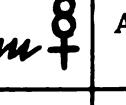
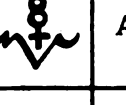
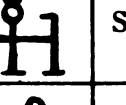
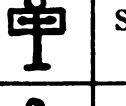
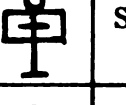
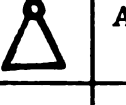
|  | Mercurius sublimatus |
| | Mercurius sublimatus |
| | Minium |
|  | Mercurius sublimatus |
|  | Arsenicum sublimatum |
|  | Sol |
|  | Mercurius sublimatus |
|  | Arsenicum sublimatum |
|  | Arsenicum sublimatum |
|  | Spiritus Stanni |
|  | Spiritus mundi |
|  | Spiritus mundi |
|  | Acetum |
| | Mercurius sublimatus |
| | Sal alcali |

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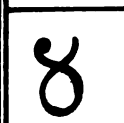
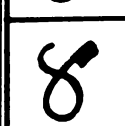
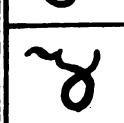
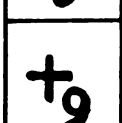
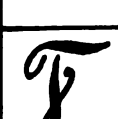
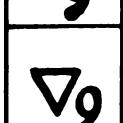
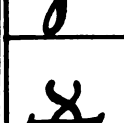
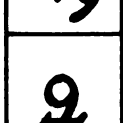
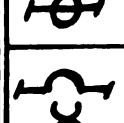
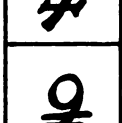
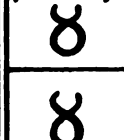
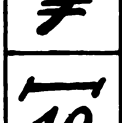
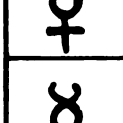
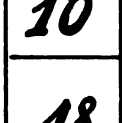
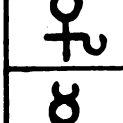
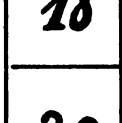
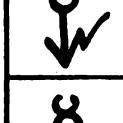
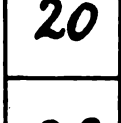
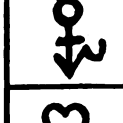
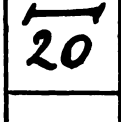
| | | | |
|---|---|---|---|
| | Cuprum | | Argentum, Luna, destillare |
| | Aurum | | Destillare |
| | Gummi, Marcasita | | Sal gemmae |
|  | Borax, Arsenicum album | | Calx ovorum |
|  | Aurum, solvere | | Lutum |
|  | Lutum philosophorum |  | Plumbum |
|  | Lutum philosophorum |  | Sal commune |
|  | Sulfur |  | Minium |
|  | Digerere |  | Venus |
|  | Mercurius sublimatus |  | Balneum mariae |
|  | Mercurius sublimatus |  | Sal commune |
|  | Mercurius sublimatus |  | Ignis, Autumnus |
|  | Mercurius sublimatus |  | Borax |
|  | Hora | | Balneum mariae |
| | |  | Libra |

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| | | | |
|---|---|---|---|
| 25 | Sal gemmae | 75 | Sal gemmae |
| 28 | Jupiter | 80 | Arsenicum rubrum |
| 30 | Caper | 85 | Mercurius sublimatus |
| 33 | Unica, Cinnabaris | 85 | Mercurius Saturni praec., Minium, Unica |
| (33) | Annus | 89 | Sal commune |
| 33 | Digerere | 90 | Coagulatio |
| 33 | Filtrare | | |
| 33 | Cinnabaris | 969 | Gummi arabicum |
| 33 | Cinnabaris | 969 | Gummi arabicum |
| 33 | Cinnabaris | 96 | Gummi arabicum |
| 39 | Sal commune | 969 | Gummi arabicum |
| 48 | Digerere | | |
| 61 | Sal germae | | |
| 63 | Tartarus | | |
| 69 | Cancer | | |

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| | Gewichte |
|---|---|
| ℨβ | Unica semis = 1 Löffel voll = 1 Loth |
| ℨj | Unica una = 2 Löffel voll = 2 Loth |
| ℔β | Libra semis = 1 Artzney-halb-Echtmaass = 12 Loth |
| ℔j | Libra una = 1 Artzney-Echt-maass = 24 Loth |
| Mβ | Mensura semis = 1 Artzney-Halbmaass = 48 Loth |
| Mj | Mensura una med. = 1 Artzney-maass = 96 Loth |
| | |
| Pβ | Pugillus semis = was man mit 2 Fingern fassen kann |
| Pj | Pugillus unus = was man mit 3 Fingern fassen kann |
| Mβ | Manipulus semis = eine halbe Hand voll |
| Mj | Manipulus unus = eine Hand voll |
| | |
| | |
| | |

| | |
|---|---|
| gr j Gr 1. Gran 1. | 1 kleines Gerstenkorn schwer = 1 Gran |
| ↄ | Obulus dimidius = 5 Gran |
| ℈ ʒ | Obulus unus = Scrupulus semis = 10 Gran |
| ℈β | Obulus unus = Scrupulus semis = 10 Gran |
| ℈i ℉ | Scrupulus unus = 20 Gran |
| ℵ | Grana viginti quatuor = 1 Scrupel und 4 Gran = 24 Gran |
| F T | Oboli quatuor = 2 Scrupel = 40 Gran |
| E | Oboli quinque = 2 ½ Scrupel = 50 Gran |
| ℨj ♎ | Drachma una (1 Quentlein) = 3 Scrupel = 60 Gran |
| ℵ | Scrupuli quinque (1 Quentlein und 40 Gran) = 5 Scrupel = 100 Gran |
| ℨij | Drachmae duae (½ Loth = 2 Quentlein) = 6 Scrupel = 120 Gran |
| ℨβ ℕℾ | Unica semis (1 Loth = 4 Quentlein) = 12 Scrupel = 240 Gran |
| ℨj, ♎, Γ | Unica una (2 Loth = 8 Quentlein) = 24 Scrupel = 480 Gran |
| ℔β, ℵ4 | Libra semis (12 Loth) ein halb Pfundt |
| ℔ℵ | Libra una (24 Loth) ein Pfundt |

Compos. & delin. Dr. F. Lüdy, jun.

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